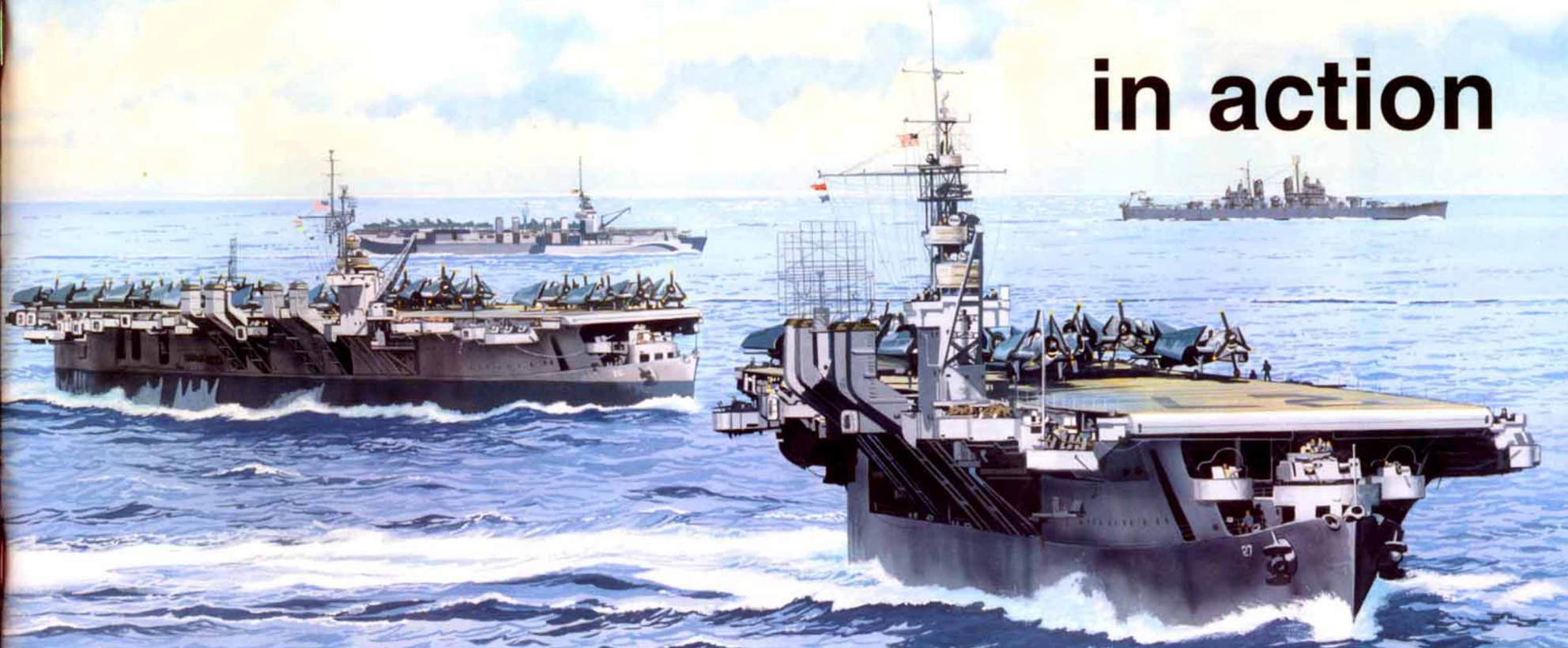
4016

US Light Carriers

in action



Don Greer

Warships Number 16

squadron/signal publications

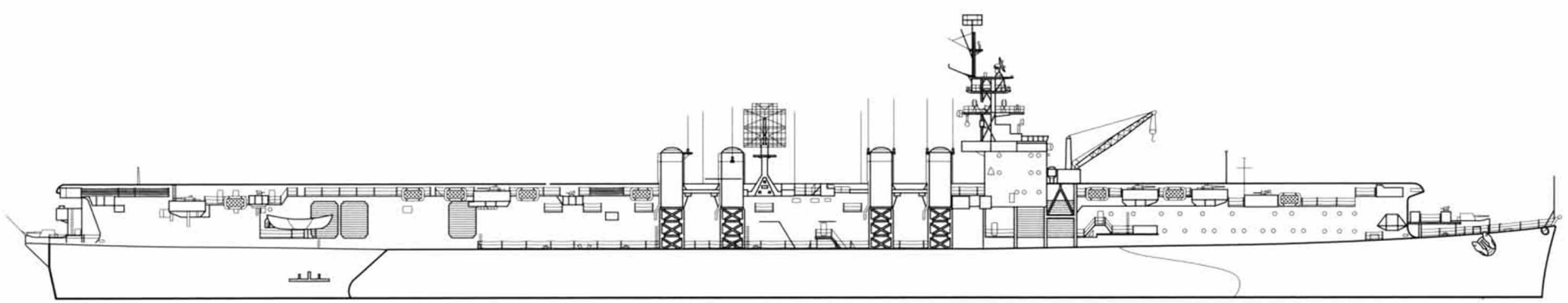
US Light Carriers

in action

By Michael C. Smith

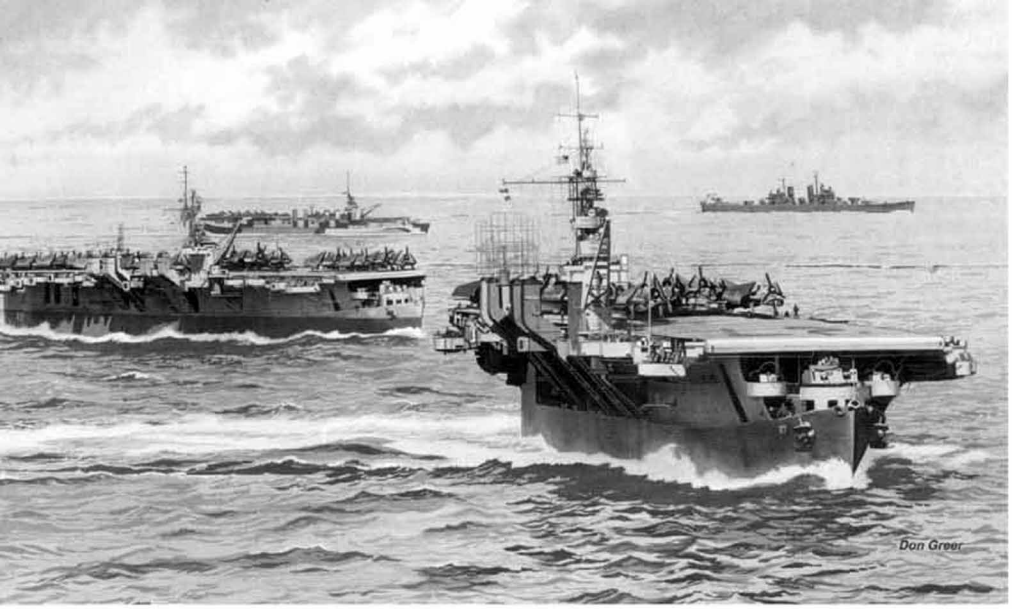
Color by Don Greer

Illustrated by Richard Hudson



Warships Number 16

squadron/signal publications



USS LANGLEY (CVL-27) leads two other INDEPENDENCE class light carriers off the Philippine Islands in October of 1944. USS MONTEREY (CVL-26) steams aft of LANGLEY, while USS SAN JACINTO (CVL-30) cruises in the distance. The three CVLs were assigned to Task Force 38 – the fast carrier strike force under Vice Admiral William F. Halsey. This force was called Task Force 58 when under Rear Admiral Raymond Spruance's command.

Acknowledgements

Many of the photographs used in this book were obtained from the photographic section of the Naval Historical Center at the Washington Navy Yard, and I would like to gratefully acknowledge their assistance. Other photos were obtained through The Floating Drydock (Kresgeville, Pennsylvania) and Elsilrac Enterprises (Winter Haven, Florida). I would also like to thank Al Adcock, Gerard Mittelstaedt, Lee Labar with the Texas Air Museum in Rio Hondo, Chris Langtree, Eugene Cammeron, the Franklin Roosevelt Presidential Library (Hyde Park, New York), the Gerald Ford Presidential Library (Grand Rapids, Michigan), and the George Bush Presidential Library (College Station, Texas) for their assistance. Most of all, I would like to thank Stephen O'Neal, Chairman and Chief Executive Officer (CEO) of the Education Council for Space Age Technology, Inc. (ECOSAT) for his untiring work to preserve the last of the light carriers, USS CABOT (CVL-28).

Dedication:

This book is dedicated to my son, Grayson James Smith.

COPYRIGHT 2002 SQUADRON/SIGNAL PUBLICATIONS, INC.
1115 CROWLEY DRIVE CARROLLTON, TEXAS 75011-5010
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by means electrical, mechanical or otherwise, without written permission of the publisher.

ISBN 0-89747-437-6

If you have any photographs of aircraft, armor, soldiers or ships of any nation, particularly wartime snapshots, why not share them with us and help make Squadron/Signal's books all the more interesting and complete in the future. Any photograph sent to us will be copied and the original returned. The donor will be fully credited for any photos used. Please send them to:

Squadron/Signal Publications, Inc.
1115 Crowley Drive
Carrollton, TX 75011-5010

Если у вас есть фотографии самолётов, вооружения, солдат или кораблей любой страны, особенно, снимки времён войны, поделитесь с нами и помогите сделать новые книги издательства Эскадрон/Сигнал ещё интереснее. Мы переснимем ваши фотографии и вернём оригиналы. Имена приславших снимки будут сопровождать все опубликованные фотографии. Пожалуйста, присылайте фотографии по адресу:

Squadron/Signal Publications, Inc.
1115 Crowley Drive
Carrollton, TX 75011-5010

軍用機、装甲車両、兵士、軍艦などの写真を所持しておられる方はいらっしゃいませんか？どの国のものでも結構です。作戦中に撮影されたものが特に良いのです。Squadron/Signal社の出版する刊行物において、このような写真は内容を一層充実し、興味深くすることができます。当方にお送り頂いた写真は、複写の後お返しいたします。出版物中に写真を使用した場合は、必ず提供者のお名前を明記させて頂きます。お写真は下記にご送付ください。

Squadron/Signal Publications, Inc.
1115 Crowley Drive
Carrollton, TX 75011-5010

(Right) The INDEPENDENCE class light carrier USS LANGLEY (CVL-27) leads Task Group 38.3 into Ulithi anchorage in the Caroline Islands on 12 December 1944. The Task Group – an element of Task Force 38 – had conducted attacks in support of US forces in the Philippines. Behind LANGLEY are the ESSEX class carrier TICONDEROGA (CV-14), the battleships WASHINGTON (BB-56), NORTH CAROLINA (BB-55), and SOUTH DAKOTA (BB-57), and three light cruisers. (US Navy)

Introduction

US naval aviation began on 10 November 1910, with the launch of an aircraft flown by Eugene Ely from a temporary flight deck constructed on the light cruiser **BIRMINGHAM** (CL-2). Ely's flight was followed by a launch from a similar jury-rigged deck on the armored cruiser **PENNSYLVANIA** (ACR-4) on 18 January 1911. The Navy experimented with floatplanes during World War One, but by the end of the war it had become clear that the future of naval aviation as an offensive weapon required ships that could launch and land combat aircraft while at sea. The US Navy's first step in this direction was to obtain authorization to convert a collier – the ex-**USS JUPITER** (AC-3) – into its first aircraft carrier, the **USS LANGLEY** (CV-1) in 1920. By the time the LANGLEY was ready for operation in 1922, the Navy had acquired two more vessels for conversion into carriers, the incomplete battlecruisers **LEXINGTON** and **SARATOGA**. The giant battlecruiser hulls were available due to the 1921 Washington Conference's stringent limitations on capital ship construction. These required all battlecruisers and battleships then under construction to be scrapped, with the exception of two per nation, which could be converted into aircraft carriers.

LANGLEY did not join the fleet until the end of 1924, and LEXINGTON and SARATOGA not until 1928, by which time the Navy had to decide how to utilize the remaining 69,000 tons of additional carrier construction available under the Treaty. Based on the belief that more numerous, but smaller carriers were better, the 13,800 ton (12,519.4 MT) **USS RANGER** (CV-4) was authorized in 1930. RANGER was the Navy's first carrier designed as such from the keel up. She was to have been the first of five similarly sized carriers, but experience soon showed that she was too small for effective operation. Consequently, the tonnage reserved for the next three carriers was instead divided between the 20,000-ton (18,144 MT) **YORKTOWN** (CV-5) and **ENTERPRISE** (CV-6), both authorized in 1933. The remaining tonnage was allocated in 1935 for construction of **WASP** (CV-7). Although WASP was similar in size to the earlier RANGER, WASP was built to an improved design. The Washington Treaty lapsed in 1938, and plans began for a class of 27,100 ton (24,585.1 MT) improved YORKTOWNs. Until new plans could be drawn up, **HORNET** (CV-8) was authorized in 1938 as an improved YORKTOWN – essentially a stopgap measure – leaving **ESSEX** (CV-9) to be lead ship of the new class. During the interwar period, the Navy also made plans for the rapid expansion of the carrier force in the event of war by drawing up plans for converting existing merchant ships to carriers. These ship conversions, designated 'XCVs,' were to be used for transporting aircraft to the battle zone as part of the Navy's 'Orange' war plan. The conversions, similar to those eventually undertaken by Japan during the war and resulting in the light carriers **HIYO** and **JUNYO**, never left the drawing board in the US, where they were quickly replaced by plans for the 'emergency-built' Escort Carriers (CVEs) and Light Carriers (CVLs).

Concerned about the increasing losses of merchant tonnage in the Atlantic to German U-boats (*unterseebooten*; submarines), President Franklin D. Roosevelt proposed converting merchant ships to carriers for anti-submarine protection in October of 1940. As Undersecretary of the Navy during World War One, Roosevelt had been an early proponent of naval aviation, and the need for convoy air protection was readily apparent in the Atlantic. Roosevelt was not the only one interested in conversions. About the same time, Rear Admiral William F. 'Bull' Halsey, then Commander of Carriers, Battle Force, proposed similar conversions for pilot training and aircraft transport. Admiral Harold Stark, the Chief of Naval Operations, explored these possibilities via a series of conferences, but his estimated time for conversions was about one and a half years, which Roosevelt deemed unacceptable. Like the later CVLs, the Navy's estimates were based on obtaining the best possible carrier, while the President's concern was getting the carriers completed and out to the war zones. To that end, Roosevelt ordered the conversions be limited to three months in duration. The result was the commissioning of the first American escort carrier, the **LONG ISLAND** (ex-**MORMACMAIL**) (AVG-1, later CVE-1) on 2 June 1941. The LONG ISLAND was followed by some 118 CVEs, which served in both the Atlantic and the Pacific with great success. Unlike the fleet carriers or the prewar conversion plans, the CVEs were designed and constructed under wartime pressures, using materials – in this case, merchant ships – already built for other purposes. Additionally, the CVEs were built to drastically lower standards and tolerances than the fleet carriers.

Carrier conversions for Anti-Submarine Warfare and aircraft transport purposes were not the only conversions on the President's mind. After the completion of USS HORNET in October of 1941, the US Navy did not expect to see another new carrier until the lead ship of the ESSEX class was completed sometime in 1944. This gap in carrier construction did not escape the President's attention, and in August of 1941, Roosevelt proposed converting some of the **CLEVELAND** class (CL-55) light cruiser (CL) hulls under construction into light carriers, or CVLs.

Cruiser conversions into fleet carriers - indeed conversions of almost any kind of ship - were not a new concept to the US Navy in 1941. What was different about the **INDEPENDENCE** class was the austere nature of the conversion. The Navy's initial plans for the cruiser conver-

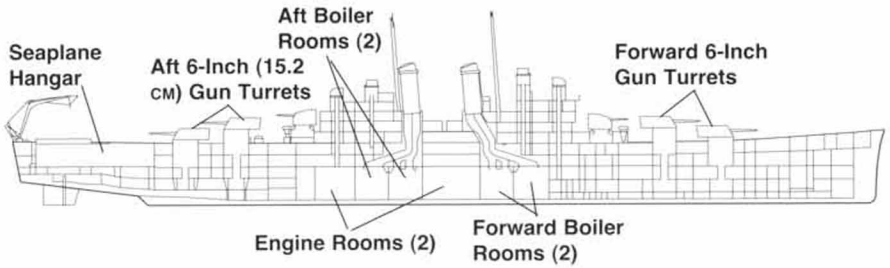
President Franklin D. Roosevelt examines a model of an escort carrier developed by Henry J. Kaiser (standing, second from left) on 18 March 1943. Roosevelt authorized the conversion of merchant ships into escort carriers and CLEVELAND class light cruiser hulls into light carriers. (FDR Library)

The escort carrier LONG ISLAND (AVG-1, later CVE-1) steams off the Virginia coast during the fall of 1941. Two Brewster F2A Buffalo fighters were spotted on the forward flight deck. Escort carriers were one solution to the US need for additional carriers; light carriers were another wartime solution. (Elsilrac)

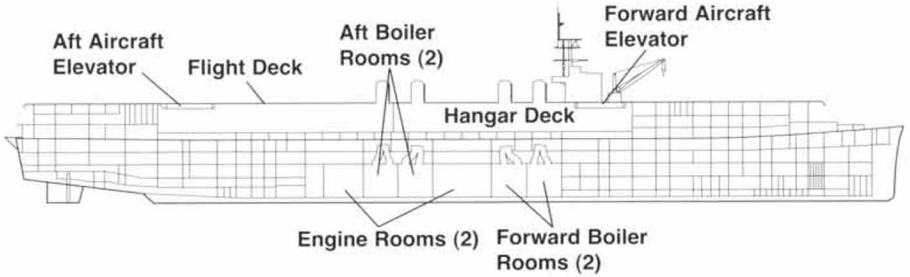
sions the President wanted, estimated they could not be completed any sooner than the ESSEX class carriers under construction, and in any event would be inferior designs. The Navy also had an ulterior motive. After World War One, Congress saddled the Navy with the inferior, wartime emergency-built ships and it did not wish to have ships built to austere wartime standards imposed on it after World War Two. After preparing some general arrangement sketches, the Navy rejected the President's proposal on 13 October 1941. Roosevelt disagreed in a later 25 October memo, which elicited the comment from the Navy's Bureau of Ships (BuShips) that *"if, however it were decided to accept a smaller flight deck, smaller plane capacity, and less effectiveness in air operations in other respects – somewhat along the lines of the converted AVGs (CVEs) – the conversion could, of course, be completed more quickly."* This was exactly what Roosevelt wanted – a conversion that sacrificed the Navy's peacetime 'gold-plated' standards in the interests of speed and ultimately, hulls in the water. Accordingly, President Roosevelt directed that one light carrier be converted from a CLEVELAND class light cruiser on 2 January 1942. The subsequent INDEPENDENCE class was expanded to three ships on 10 February, to six vessels on 27 March, and finally to nine ships on 4 June 1942.

USS MONTEREY (CVL-26) nears completion at the New York Shipbuilding Corporation Yard in Camden, New Jersey on 5 June 1943. She was commissioned 12 days later, on 17 June. MONTEREY was the fifth of nine INDEPENDENCE class light carriers built between June of 1941 and December of 1943. (Floating Drydock)

CLEVELAND Class Light Cruiser Cross Section

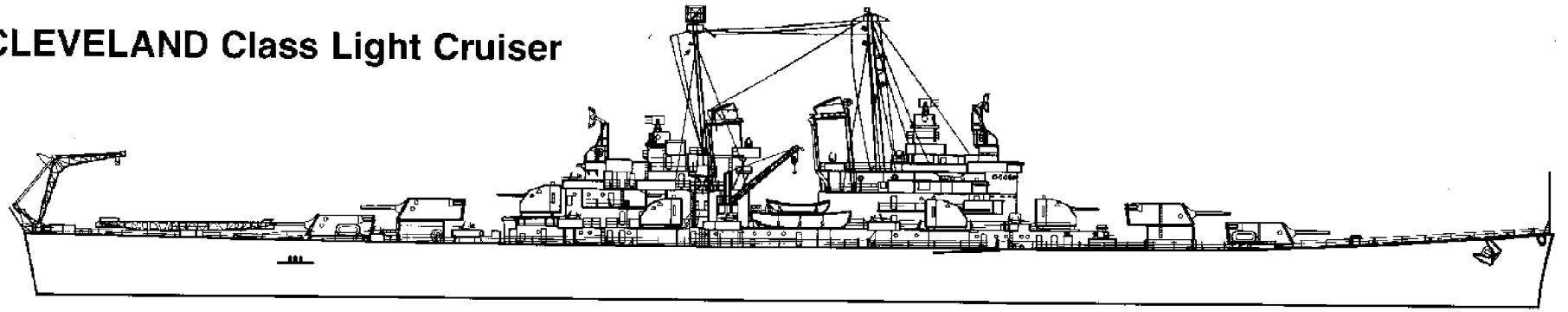


INDEPENDENCE Class Light Carrier Cross Section

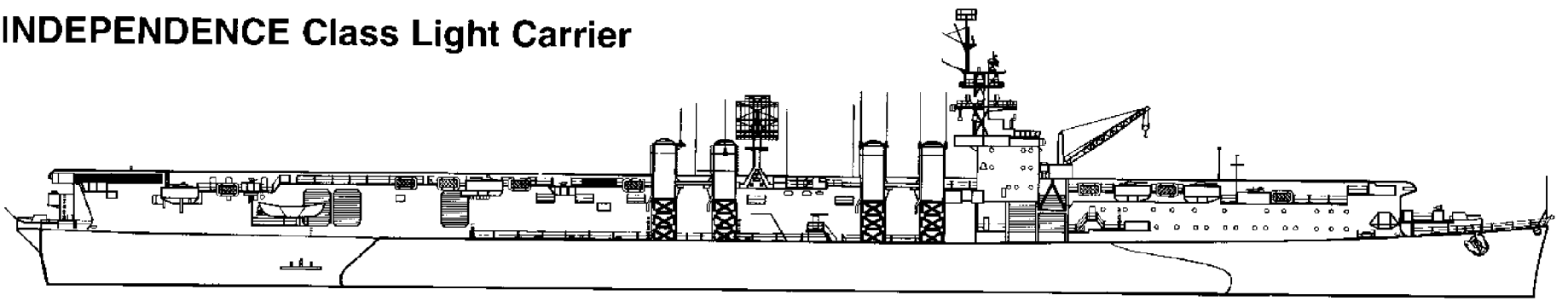


Development

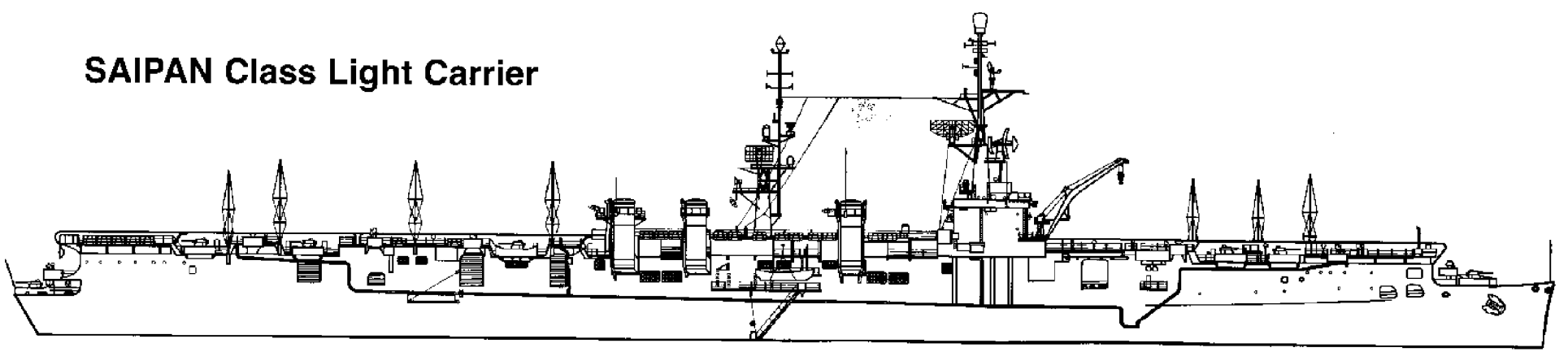
CLEVELAND Class Light Cruiser



INDEPENDENCE Class Light Carrier



SAIPAN Class Light Carrier



INDEPENDENCE Class Light Carriers

Work on this 'desperate measure' began with a meeting between BuShips, the Bureau of Aeronautics (BuAer), and the New York Shipbuilding Corporation, Camden, New Jersey, on 3 January 1942. The first INDEPENDENCE class carrier was authorized on 10 January. The completed, albeit preliminary, design based on the CLEVELAND class (CL-55) light cruiser was sent on 3 February and revised on 27 March. The designers chose to scrap the more sophisticated plans in favor of a conversion along the lines of the **SANGAMON** class (CVE-26) escort carriers that had been converted from oilers. To preserve the strength of the cruisers' main deck, and provide a level surface for handling aircraft, a new hangar deck was built approximately four feet (1.2 M) above the cruisers' main deck. A hangar height of 17 feet 4 inches (5.3 M) was relatively easy to obtain since there was no requirement that these smaller carriers carry replacement aircraft suspended from the overhead, as was the case in the larger carriers.

The narrow cruiser hull was blistered to solve stability problems identified in the Navy's earlier conversion design. Designers initially attempted a simple flush-deck design with no island, but this soon fell by the wayside. The ships' closed hangar deck meant the aircraft-handling crane would have to encroach on the flight deck. Additionally, the carriers also needed a large radar mast and a provision for disposing stack gases. Consequently, a small island was constructed on the starboard side. Eighty-two tons (74.4 MT) of concrete were poured into tanks on the port side to counterweight the crane, island, and the four funnels. Changes continued to be made to the design during fitting out. A short flight deck extension was added between the stacks to allow aircraft to be pushed out of the way and a larger extension was built around the starboard side of the forward elevator.

The INDEPENDENCE class carriers had an overall length of 622 feet 6 inches (189.7 M) long, but were only 600 feet (183 M) long at the waterline. The hull blisters increased the beam from the cruiser's original 63 feet (19.2 M) to 71 feet 6 inches (21.8 M) at the waterline, while the overall beam at the flight deck – including sponsons and funnels – measured some 109 feet 2 inches (33.3 M). The flight deck was 552 feet (168.2 M) long and 73 feet (22.2 M) wide. The hangar deck was 258 feet (78.6 M) long and 55 feet (16.8 M) wide. Their design displacement amounted to 11,000 tons (9979.2 MT), but grew to 15,100 tons (13,699 MT) at full load. The design draft of 20 feet (6 m) increased to 25 feet 2 inches (7.7 M) at full load.

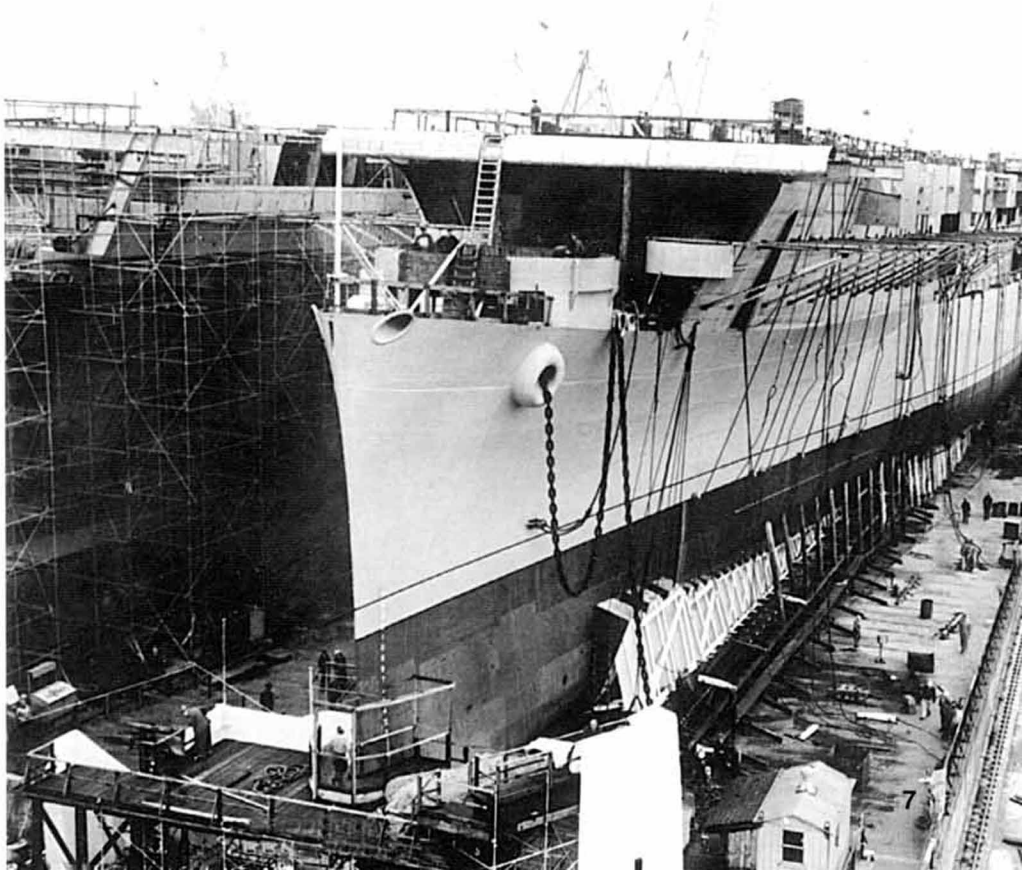
The aircraft handling equipment consisted of two elevators, each 42 feet (12.8 M) x 44 feet (13.4 M) and having a 14-ton (12.7 MT) capacity and a single crane capable of hoisting up to seven tons (6.4 MT) (aircraft were normally hoisted aboard in an empty condition – the Grumman **TBF/TBM Avenger** weighed approximately 11,000 pounds [4989.6 KG] empty). A single H2-1 catapult was fitted to the flight deck's port side.

The INDEPENDENCE class light carrier retained the four Babcock & Wilcox boilers and four General Electric geared turbines of the CLEVELAND class. The carrier's best speed was 31.6 knots (58.6 KMH) – only marginally slower than the 33 knots (61.2 KMH) of the cruisers. Her endurance, as designed, was 12,500 nautical miles (23,164.8 KM) at 15 knots (27.8 KMH), however in practice this was limited to 8325 nautical miles (15,427.8 KM) at 15 knots. The hull blisters did provide space for an additional 635 tons (576.1 MT) of fuel oil storage.

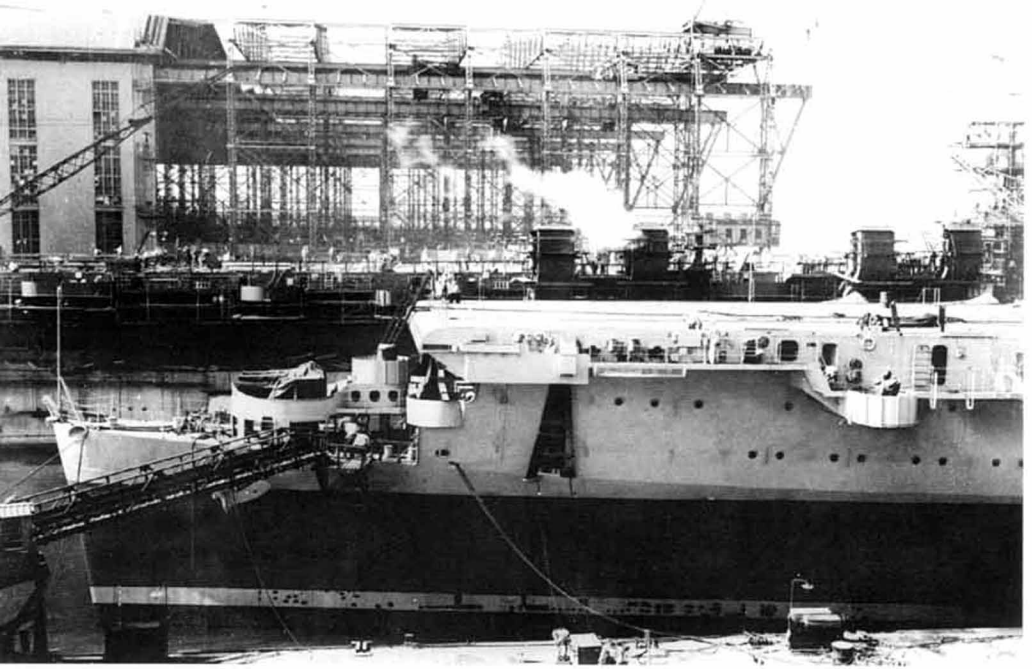
INDEPENDENCE (CV-22; CVL-22 from July of 1943) initially carried a mixture of 5-inch (12.7 CM) guns, 40MM cannon, and 20MM cannon for both surface and air defense. A single 5-inch weapon was mounted on the bow and stern, while the 40MM and 20MM guns were placed in sponsons mounted along the periphery of the flight deck. Only INDEPENDENCE carried the 5-inch guns; these were quickly removed and replaced with 40MM quad mounts.

Passive resistance through armor was limited, consisting of protection for exposed control spaces and on the hangar sides to protect the torpedo stowage and elevators. The torpedo stowage compartment was the most exposed of all, being housed just aft of the rear elevator above the main deck. The ships received no real protection against bombs or torpedoes. The first two units received no belt armor at all due to wartime shortages, but the rest of the class received five-inch (12.7 CM) belt protection, although the type of steel used varied depending on availability. The five-inch belt armor, amounting to an additional 360 tons (326.6 MT), was designed to stop five and six-inch shellfire, but would not impede a torpedo. The main bomb magazines in all ships (housed in the former cruisers' forward six-inch magazines) were roofed with two-inch (5 CM) armor plate.

The INDEPENDENCE class light carriers were originally envisioned to embark an air group consisting of fighters, dive-bombers, and torpedo-bombers. This was similar to that of the larger fleet carriers, albeit in small numbers. The Douglas **SBD Dauntless** dive-bombers didn't last



USS PRINCETON (CVL-23) rests on the ways at Camden, New Jersey prior to its launching on 3 October 1943. The platform for the launch ceremonies was completed and placed ahead of the ship's bow. Construction on another INDEPENDENCE class carrier continued beside PRINCETON.



Yard workers continue fitting out USS MONTEREY (CVL-26) at Camden on 5 June 1943. The catapult was installed on the port forward flight deck. A sister ship berthed to starboard of MONTEREY is also undergoing post-launch construction. (Floating Drydock)

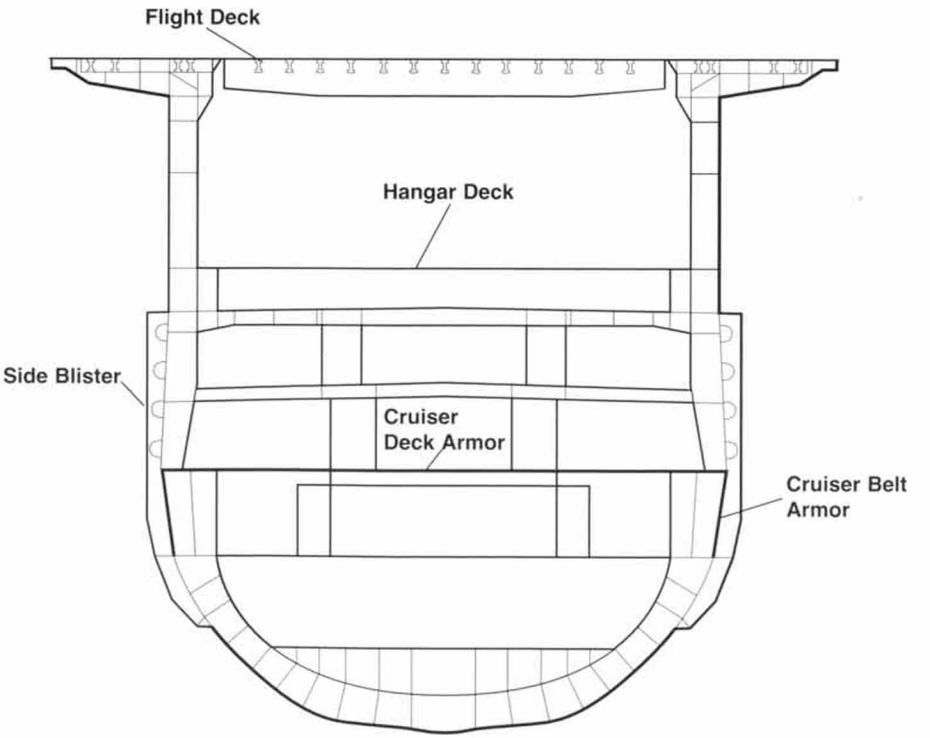
USS BELLEAU WOOD (CVL-24) undergoes fitting out at the New York Shipbuilding yard on 27 March 1943. The new quad mounted 40MM anti-aircraft guns were installed in the bow gun tub, immediately forward of the flight deck overhang. This replaced the 5-inch (12.7 CM) gun originally designed for INDEPENDENCE class carriers. (Floating Drydock)

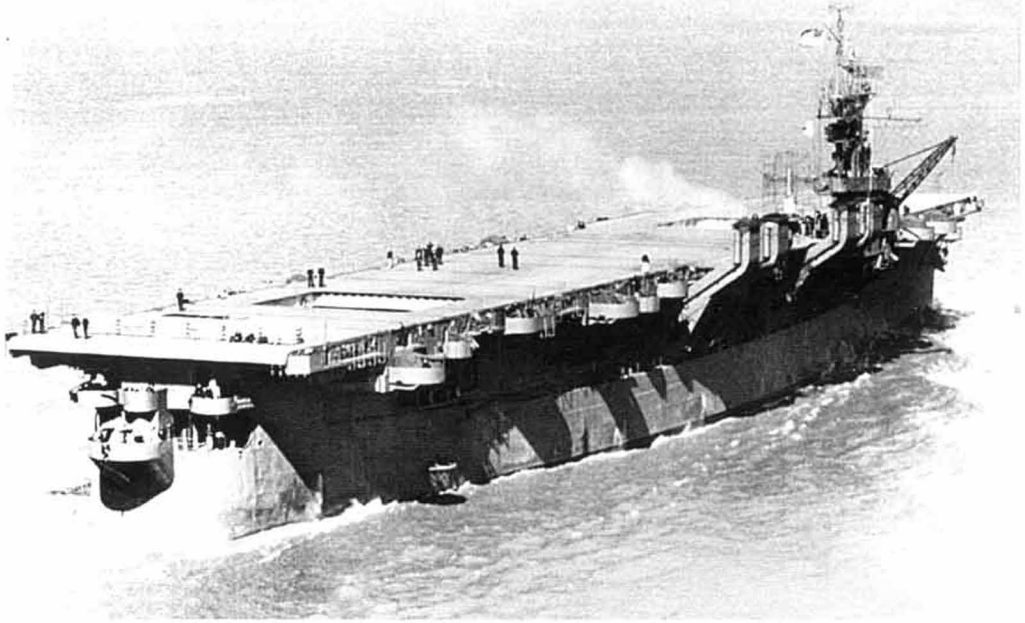
long; their non-folding wings severely restricted both hangar and flight deck space. The class quickly changed to a mixed air group of 24 Grumman **F6F Hellcat** fighters and nine Grumman TBF/TBM Avenger torpedo-bombers.

When completed (and as the Navy had warned), the INDEPENDENCE class' final design violated nearly every rule about carrier design the Navy had so far learned. The ship was too small for effective operations in some weather conditions; the flight deck, hangar deck, and workshops too small; the aircraft stowage inadequate; and the protection was insufficient. In the one way that mattered; however, the ships were superb. Three INDEPENDENCE class CVLs entered service between the commissioning of the first ESSEX class carrier in December of 1942 and the second in April of 1943. The remaining six CVLs entered service later in 1943 and all nine had reached the fleet in time to meet the Japanese carrier fleet when it finally sortied for battle in June of 1944. The nine light carriers represented (approximately) the air group of four additional heavy carriers at a time when the US Navy needed them the most to replace early war losses. In contrast, only seven of the 24 ESSEX class carriers eventually completed were commissioned by the end of 1943, and had reached the fleet during the same time.

Historians continue to debate the wisdom, at least in hindsight, of building so many ESSEX class fleet carriers and Roosevelt himself has been taken to task for authorizing so many escort carriers. None, however, question the value of the light carriers. The INDEPENDENCE class provided exactly what was needed, when it was needed – a rare quality among war materiel.

INDEPENDENCE Class Cross Section

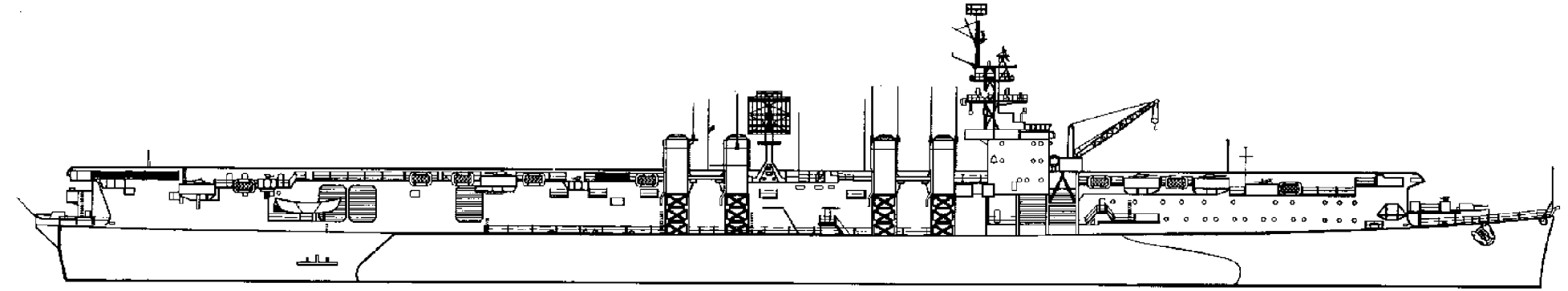


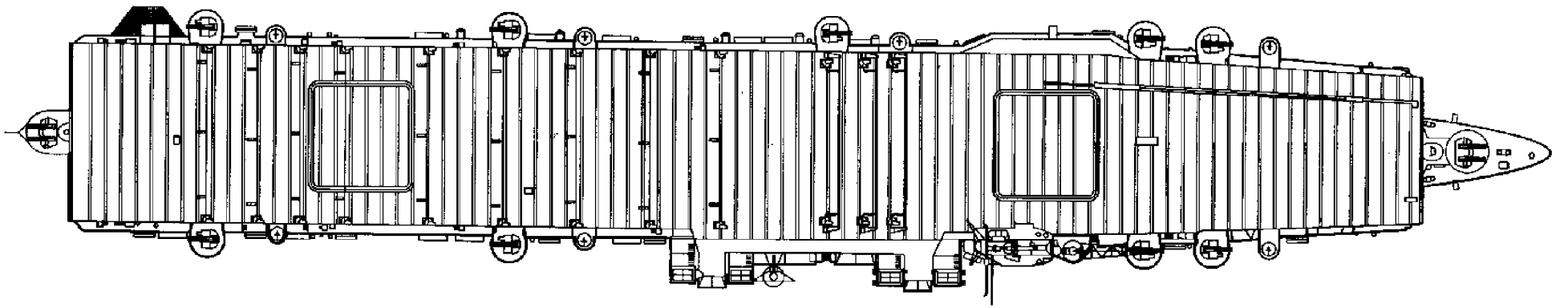


(Above) PRINCETON cruises off the Philadelphia Navy Yard during a contractor's test on 28 March 1943. Both flight deck elevators were lowered to the hangar deck. A quad-mounted 40MM anti-aircraft weapon was mounted in the stern gun tub. (US Navy)

(Right) INDEPENDENCE (CVL-22) conducts a shakedown exercise from the Philadelphia Navy Yard on 12 March 1943. Her 'as completed' appearance included a 5-inch gun on the bow; another 5-inch weapon was mounted on the stern. Quad mounted 40MM cannon soon replaced both 5-inch guns, while a 40MM twin mount was later fitted to the port forward flight deck. The flight deck was later given extensions along the starboard side prior to INDEPENDENCE deploying for the Pacific. (US Navy)

(Below) USS COWPENS (CVL-25) cruises from the Philadelphia Navy Yard on 25 June 1943. The ship was commissioned nearly one month earlier, on 28 May. Several aircraft are spotted on COWPENS' flight deck and her aft aircraft elevator is lowered. (US Navy)





INDEPENDENCE Class Light Aircraft Carrier Specifications

Length:.....622 feet 6 inches (189.7 M)
Beam:.....71 feet 6 inches (21.8 M)
Draft:.....25 feet 2 inches (7.7 M)
Displacement:..11,000 Tons (9979.2 MT) Standard, 15,100 Tons (13,699 MT) Full Load
Propulsion:.....100,000 SHP/Four Screws

Speed:.....31.6 Knots (58.6 KMH)
Compliment:.....1569 Officers and Men
Armament:.....26 x 40MM Guns and 16 x 20MM Guns
Aircraft:.....33 (24 F6F Hellcats and Nine TBF Avengers)

A catapult test deadweight is placed on the flight deck of USS INDEPENDENCE at Mare Island Navy Yard, California on 11 July 1943. This deadweight simulated a fully-laded aircraft during catapult tests. A canvas sheet covers the breech mechanism of the forward twin 40MM weapon along the flight deck catapult. (US Navy)

The US flag flies from the mainmast of INDEPENDENCE while berthed at Mare Island Navy Yard on 11 July 1943. Her two forward exhaust funnels were placed immediately aft of the island along the starboard side. Two additional funnels were located farther aft. White dashed lines ran down the center and sides of the flight deck. Single mount 20MM cannon – shrouded in canvas – were installed along the port catwalk. (US Navy)

INDEPENDENCE cruises in San Francisco Bay on 15 July 1943, nearly two weeks after joining the US Pacific Fleet. Nine SBD Dauntless dive bombers were spotted on the aft flight deck, while nine TBF Avenger torpedo-bombers were located forward. The Dauntless' lack of wing folding ended its short deployment aboard the light carriers, which only carried torpedo-bombers and fighters into combat. (US Navy)

INDEPENDENCE makes a training cruise in San Francisco Bay on 15 July 1943. On that date, her designation was changed from CV-22 to CVL-22, which indicated her Light Aircraft Carrier status. Quad mounted 40MM cannon replaced her bow and stern 5-inch guns prior to her arrival in the Pacific. INDEPENDENCE was finished in Measure 21, the overall Navy Blue scheme, with small white hull numbers on the bow. (US Navy)

Wartime Modifications

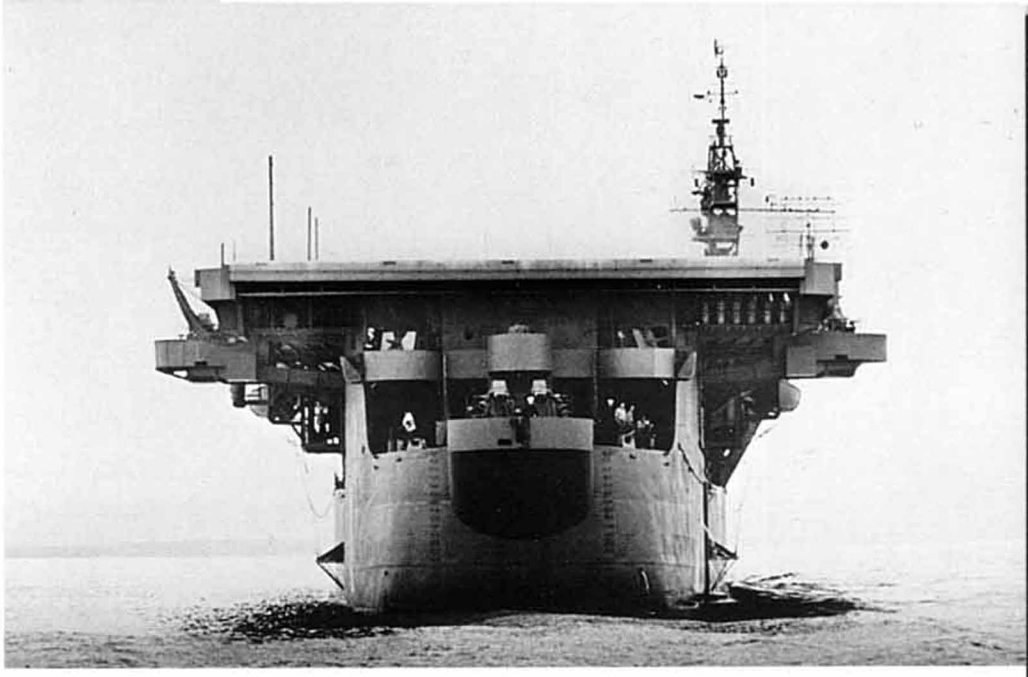
The first of the wartime modifications to the INDEPENDENCE class took place before the units left the US East Coast shipyards where they were built. The class was designed to carry single open 5-inch (12.7 CM)/38 caliber guns mounted on the bow and stern for defense against surface attack. These weapons were standard issue for the YORKTOWN and ESSEX class carriers, but following the shakedown cruise of INDEPENDENCE (CVL-22), her commanding officer recommended they be replaced with quadruple 40MM Bofors mounts, which were more useful against air attack. The armament change was approved and all other units received 40MM weapons from the beginning. The class was also initially approved for only eight 40MM twin mounts, but on 8 February 1943 a ninth 40MM twin was authorized to be mounted on the port side gallery deck. Only INDEPENDENCE was originally built with eight 40MM twin mounts.

Light anti-aircraft armament was originally designed to be at least ten 20MM Oerlikon cannon, but six more 20MM mounts were approved on 6 August 1943. Some of the 20MM single guns were eventually replaced with 20MM twin mounts. There were efforts to replace the 20MM twins with 40MM twins, but the latter was a much heavier weapon. Their addition would have added an unacceptable amount of weight high up in the ship where it would have compromised the carriers' stability.

Other modifications began with INDEPENDENCE's refit after she was torpedoed in November of 1943. The carriers were initially provided with one H2-1 catapult on the port side of the flight deck. A second catapult was approved for INDEPENDENCE in March of 1944. The change was approved class wide in October of 1944. Refitting carriers also received a second yardarm, new radars, and new 20MM sponsons alongside the flight deck, as well as some radar-controlled anti-aircraft gun directors. To compensate for the added topweight, some existing 20MM mounts were deleted, including the four 20MM weapons on the bow and stern quarters.

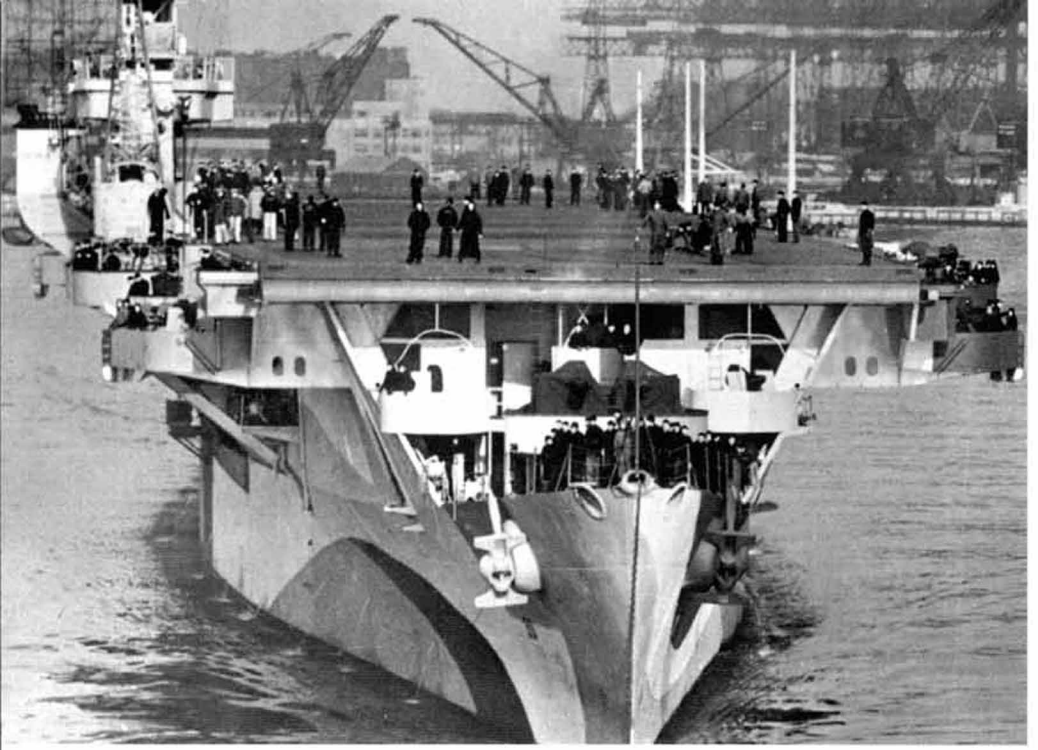
PRINCETON (CVL-23) was lost before her scheduled refit, but the remaining carriers were gradually released from the war zone for modification. **BATAAN** (CVL-29) was refitted in the late fall of 1944, **BELLEAU WOOD** (CVL-24) and **MONTEREY** (CVL-26) departed in January of 1945, **COWPENS** (CVL-25) in March, **CABOT** (CVL-28) on 17 April, and **LANGLEY** (CVL-27) on 18 May. **SAN JACINTO** (CVL-30) departed for refit on 31 August 1945, with the formal Japanese surrender only days away.

INDEPENDENCE lies at anchor off the Mare Island Navy Yard near San Francisco on 13 July 1943. She was originally equipped with single 20MM cannon in tubs under the flight deck overhang. These weapons were removed during her refit in 1944. A quad mount 40MM cannon was placed in the bow tub, ahead of the 20MM tubs. (US Navy)



INDEPENDENCE lay off Mare Island on 13 July 1943, armed with two single mount 20MM cannon fitted in tubs at her stern. These guns were also removed during the 1944 refit. The quad 40MM weapon was fitted to an enlarged sponson at the stern. Three radio antennas were raised along the flight deck's port side when there were no flight operations. (US Navy)

USS SAN JACINTO (CVL-30) is equipped with the original bow 20MM cannon while at anchor in January of 1944 – less than one month after she was commissioned. Single tub-mounted 20MM guns flanked the bow 40MM quad cannon. She was finished in the Measure 33, Design 7A camouflage scheme of Navy Blue (5-N), Haze Gray (5-H), and Pale Gray (5-P). A small white hull number (30) was painted on the bow, aft of and below the anchor. SAN JACINTO was fitted with the original mast with only one yardarm for signal flags. An SC-2 air search radar antenna was mounted on the foremast, with the SG surface search radar antenna immediately aft of the SC-2. (Floating Drydock)



(Above Left) SAN JACINTO makes a slow speed cruise from the Philadelphia Navy Yard on 17 January 1944. She and her sisters were equipped with two anchors at the bow for mooring in various conditions. Canvas covers were placed over the bow quad mounted 40MM cannon and single 20MM guns. These covers protected the weapons from corrosive sea spray. A number of sailors and yard workers mill about on the flight deck. (Floating Drydock)

(Above) INDEPENDENCE is moored at Hunters Point Navy Yard, California on 19 June 1944. The carrier was just refitted and repaired after being hit by a Japanese torpedo off Tarawa in November of 1943. She was repainted in the Measure 3_, Design 8A camouflage of Navy Blue (5-N), Ocean Gray (5-O), and Light Gray (5-L). A 26 foot (7.9 M) whaleboat for crew transfer and rescue was mounted on the aft starboard side. The pier crane's cab base appeared just above the flight deck. (Floating Drydock)

(Left) INDEPENDENCE is docked at Hunters Point on 19 June. The single 20MM cannon and their tubs were removed during this refit, due to an insufficient field of fire compared to the gun positions along the flight deck. The area under the flight deck overhang was painted white, which lessened the dark shadows of these areas. INDEPENDENCE was fitted with a second yardarm above the original one on her superstructure. An SM height finder radar antenna was mounted on her foremast, which replaced the earlier SC-2 backup air search radar antenna. (Floating Drydock)

Ships' Histories

USS INDEPENDENCE (CVL-22)

The lead ship in the class was laid down as the light cruiser **AMSTERDAM** (CL-59) on 1 May 1941. She was reordered as a light carrier on 10 January 1942 when 39.5% complete and commissioned as USS INDEPENDENCE on 14 January 1943. After shakedown exercises in the Caribbean, INDEPENDENCE joined the Pacific Fleet at San Francisco on 3 July 1943. She participated in the strikes on Marcus, Wake, Bougainville, and Rabaul. On 20 November 1943, the carrier sustained serious damage in a torpedo attack while supporting the landings on Tarawa. After an extensive refit and training as the first 'night carrier,' INDEPENDENCE rejoined the fleet in July of 1944 and participated in operations in the Philippines, Iwo Jima, and Okinawa. After the war ended, INDEPENDENCE participated in Operation MAGIC CARPET, returning servicemen to the US. She received eight battle stars for her World War Two service.

INDEPENDENCE was used in the Operation CROSSROADS atomic bomb tests at Bikini Atoll in the Marshall Islands in 1946. The operation tested the effects of nuclear weapons on warships. She sustained little damage in the first blast – an air burst – on 1 July, but the second test – an underwater burst – on 25 July caused serious damage to her flight deck. INDEPENDENCE was towed to Kwajalein in the Marshalls and officially decommissioned on 28 August 1946. Her radioactive hulk was used as a radiation research platform at Pearl Harbor and San Francisco before she was sunk as a target off the California coast on 29 January 1952.

USS PRINCETON (CVL-23)

PRINCETON was laid down as the light cruiser **TALLAHASSEE** (CL-61) on 2 June 1941 and reordered as a light carrier on 10 February 1942. She was commissioned 25 February 1943 and after shakedown arrived at Pearl Harbor on 9 August 1943. PRINCETON participated in strikes against Japanese installations, beginning with invasion of the Gilbert Islands in September of 1943 and including the Battle of the Philippine Sea in June of 1944.

She was supporting the landings in the Philippines on 24 October 1944 when Japanese aircraft from the bases PRINCETON had been operating against on Luzon found the carrier. A lone dive bomber scored a direct hit amidships, which caused serious damage. Rescue operations were underway when a much heavier explosion wrecked the carrier's hangar and flight decks approximately 20 minutes after the attack. Despite heavy damage, rising seas, and further Japanese attacks on the task force that hampered damage control, efforts continued to save PRINCETON. Late in the afternoon, a huge explosion – probably the torpedo magazine in the aft hangar deck – blew off the carrier's stern. The light cruiser **USS BIRMINGHAM** (CL-62), alongside PRINCETON to fight fires, suffered heavy damage and casualties from this blast. Retiring US ships sank PRINCETON shortly after the third explosion. She earned nine battle stars for her wartime service.

PRINCETON is underway during her shakedown cruise in the Caribbean on 31 May 1943. Nine SBD Dauntlesses and 12 F6F Hellcats were spotted on her aft flight deck. The nine SBDs with their non-folding wings took up nearly twice as much deck space as the 12 F6Fs with their wings folded. PRINCETON's air group replaced the SBDs with TBF Avengers before she deployed to the Pacific war zone. (US Navy)

COWPENS cruises with aircraft stowed on her flight deck in July of 1943. F6F fighters were spotted with their wings folded aft, while SBD dive-bombers were placed at the aft end. The SK long-range air search radar antenna was mounted just forward of the third exhaust stack. COWPENS arrived at Pearl Harbor following her shakedown period on 19 September 1943. (Floating Drydock)

USS BELLEAU WOOD (CVL-24)

BELLEAU WOOD was laid down as the light cruiser **NEW HAVEN** (CL-76) on 11 August 1941 and reordered as a carrier on 10 February 1942. She was commissioned on 31 March 1943 and joined the Pacific Fleet at Pearl Harbor on 9 August 1943. BELLEAU WOOD was an active part of Task Force 58 throughout 1943 and 1944, including sinking the Japanese carrier HIYO during the Battle of the Philippine Sea and participating in the Battle of Cape Engaño in October of 1944. On 30 October, BELLEAU WOOD was struck by a Japanese *kamikaze* ('Divine Wind' suicide aircraft), which caused fires that killed 92 crewmen. Following repairs, she participated in raids on Japan. After the war ended, BELLEAU WOOD participated in Operation MAGIC CARPET before being placed in reserve on 13 January 1947. She received 12 battle stars for her World War Two service.

BELLEAU WOOD was commissioned into French service as **BOIS BELLEAU** (R97) on 5 September 1953 and saw service off French Indochina (Vietnam) with the French Navy. She was returned to the US in September of 1960 and was stricken a month later. BELLEAU WOOD was scrapped at Chester, Pennsylvania in 1962.

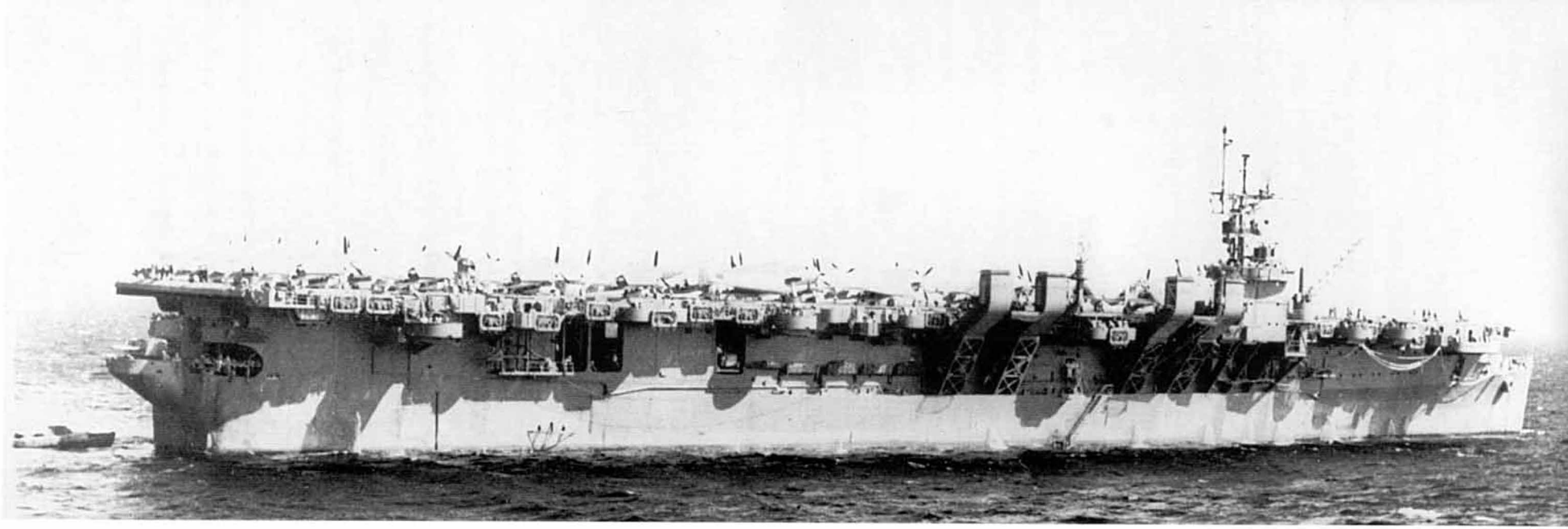
USS COWPENS (CVL-25)

COWPENS was laid down as the light cruiser **HUNTINGTON** (CL-77) on 17 November 1941 and reordered as a carrier on 27 March 1942. She was commissioned on 28 May 1943 and joined the Pacific Fleet at Pearl Harbor on 19 September 1943. COWPENS operated with Task Force 58 in 1943 and 1944, including participating in the Battle of the Philippine Sea and the invasion of the Philippines. She suffered damage from hangar fires during the 18 December 1944 typhoon east of the Philippines and was forced to briefly retire to Ulithi in the Carolines for repairs. Following the cessation of hostilities, COWPENS took part in Operation MAGIC CARPET cruises to return US servicemen home and was placed in reserve on 13 January 1947. She received a Navy Unit Commendation and 12 battle stars for her World War Two service. On 16 May 1959, COWPENS was redesignated as an aircraft transport (AVT-1) while in reserve, but was never reactivated. She was stricken on 1 November 1959 and scrapped at Portland, Oregon in 1961.

USS MONTEREY (CVL-26)

MONTEREY was laid down as the light cruiser **DAYTON** (CL-78) on 29 December 1941 and reordered as a light carrier on 27 March 1942. She was commissioned on 17 June 1943 and joined the Pacific Fleet at the Gilberts on 19 November 1943. MONTEREY sustained damage in a typhoon on 18 December 1944, which required repairs at Bremerton, Washington. On her return to Task Force 58, she supported the landings at Okinawa in April of 1945 and took part in strikes against the Japanese home islands. MONTEREY was decommissioned on 11 February 1947 after participating in Operation MAGIC CARPET. She received 11 battle stars for her World War Two service. Gerald R. Ford, the 38th President of the United States (1974-1977), served as a physical education officer aboard MONTEREY during the war.

MONTEREY was recommissioned as a training carrier on 15 September 1950 and served in that capacity until rejoining the reserve fleet on 16 January 1956. She was reclassified AVT-2 while still in reserve on 15 May 1959. MONTEREY was stricken on 1 June 1970 and later scrapped.



LANGLEY idles in the western Pacific in July of 1945. She was finished in Measure 21 camouflage of overall Navy Blue (5-N). F6F Hellcats and TBM (Eastern Aircraft-built TBF) Avenger torpedo bombers were spotted on the flight deck. The light carrier LANGLEY was named for the first US aircraft carrier, LANGLEY (CV-1). (Floating Drydock)

USS LANGLEY (CVL-27)

LANGLEY was authorized as the light cruiser **FARGO** (CL-85). On 27 March 1942, the shipyard was authorized to construct FARGO as a light carrier named **CROWN POINT**. She was laid down on 11 August 1942 and her name changed to LANGLEY prior to her launching. She commissioned on 31 August 1943 and first sortied with Task Force 58 for the invasions of the Marshall Islands on 19 January 1944. Following service with Task Force 58 throughout the Pacific offensive, LANGLEY participated in MAGIC CARPET cruises and was decommissioned on 11 February 1947. She received nine battle stars for her World War Two service.

On 8 January 1951, LANGLEY was transferred to France and renamed **LAFAYETTE** (R-96). She saw action off French Indochina as part of the French Navy before returning to the US on 20 March 1963. LANGLEY was scrapped at Baltimore, Maryland in 1964.

USS CABOT (CVL-28)

CABOT was laid down as the light cruiser **WILMINGTON** (CL-79) on 16 March 1942 and reordered as a light carrier on 4 June 1942. She received her name on 23 June shortly after the ESSEX class ship CV-16 – originally named CABOT – was renamed LEXINGTON. CABOT was commissioned on 24 July 1943 and joined the Pacific Fleet at Pearl Harbor on 2 December 1943. On 25 November 1944, while supporting operations in the Philippines, CABOT suffered one hit and one near miss from *kamikaze* attacks, which killed or wounded 62 crewmembers. After the Japanese surrender, CABOT assisted in bringing servicemen home (Operation MAGIC CARPET). She received the Presidential Unit Citation and nine battle stars for her World War Two service.

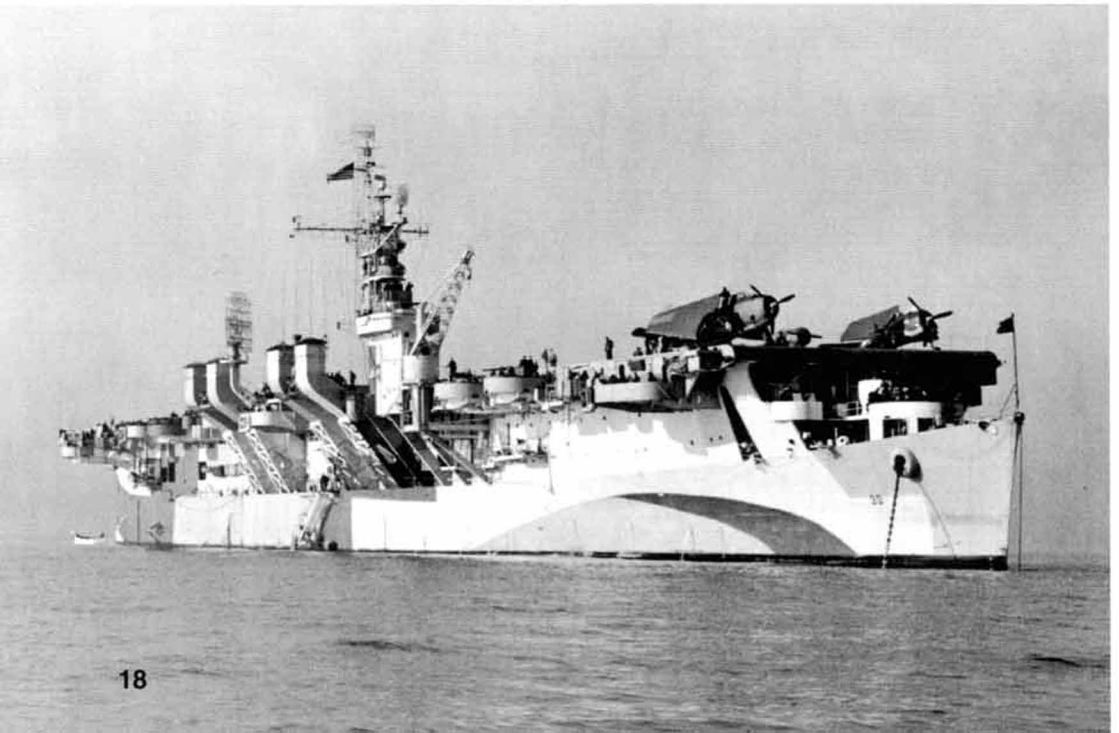
CABOT was decommissioned on 11 February 1947 and was recommissioned 27 October 1948 as a training and Anti-Submarine Warfare (ASW) carrier. She was again decommissioned 21 January 1955 and was reclassified as an aircraft transport (AVT-3) while in reserve on 15 May 1959. CABOT was reactivated and modernized in 1965-1967 and transferred to Spain, where she was renamed **DEDALO** (R-01). On 30 August 1967, the Spanish Navy commissioned DEDALO as a carrier for helicopters and Hawker Siddeley **AV-8S Harrier** Short Take-Off/Vertical Landing (STOVL) attack aircraft. She was officially stricken from the US Navy on 1 August 1972 and sold to Spain on 5 December 1972. DEDALO was decommissioned from Spanish service on 5 August 1989 and returned to the US, where preservation efforts commenced. CABOT remained at New Orleans, Louisiana, until October 1997, when she was towed to South Texas. Further preservation efforts failed, and scrapping activities began in November of 2000 in Brownsville, Texas. The ship's island, ready room, and Combat Information Center (CIC), along with sections of the flight deck and her anti-aircraft weapons, are preserved at the Texas Air Museum in nearby Rio Hondo, Texas.

USS BATAAN (CVL-29)

BATAAN was authorized as the light cruiser **BUFFALO** (CL-99), but was designated for completion as a light carrier on 4 June 1942 and laid down as such on 31 August 1942. She was commissioned on 17 November 1943 and first saw action supporting the landings at Hollandia, New Guinea in April of 1944. After the Japanese surrender, she took part in Operation MAGIC CARPET and entered the reserve fleet at Philadelphia on 11 February

USS SAN JACINTO (CVL-30) slowly moves near the Philadelphia Navy Yard on 17 January 1944. She was conducting shakedown exercises before joining the Pacific Fleet the following spring. SAN JACINTO was finished in the Measure 33, Design 7A camouflage of Navy Blue, Haze Gray, and Pale Gray. Her flight deck was in the new darker blue Flight Deck Stain 21, which superseded the earlier Deck Blue (20-B) finish on carrier flight decks beginning in 1944 (Floating Drydock)

SAN JACINTO rides at anchor in January of 1944. Two TBM Avengers were spotted on the forward flight deck. An aircraft handling crane was mounted immediately forward of the island superstructure. The four exhaust stacks were angled away from the flight deck to reduce the corrosive effects of exhaust gases on parked aircraft. (Floating Drydock)



1947.

BATAAN was recommissioned on 13 May 1950 and launched strikes in support of ground forces in Korea from December of 1950 through June of 1951. She spent the summer of 1952 and the first several months of 1953 ferrying personnel and supplies to Korea and launching additional strikes. BATAAN was placed in reserve again on 9 April 1954. She was redesignated AVT-4 while in reserve in May of 1959, stricken on 1 September 1959, and subsequently scrapped. BATAAN received six battle stars for her World War Two service and seven for her Korean War service.

USS SAN JACINTO (CVL-30)

SAN JACINTO was authorized as the light cruiser **NEWARK** (CL-100) and reordered as a light carrier named **REPRISAL** on 4 June 1942. Her keel was laid 26 October 1942, but the name REPRISAL was later transferred to a new ESSEX class ship (CV-35, never completed). CV-30 (later CVL-30) was renamed SAN JACINTO on 6 June 1943. She was commissioned on 15 December 1943 and provided search aircraft for strikes on the islands of Wake and Marcus. On 5 June 1944, the carrier departed Majuro with Task Force 58 on the Marianas operation. She received slight damage during the 18 December 1944 typhoon off the Philippines. SAN JACINTO earned five battle stars and was awarded the Presidential Unit Citation for her World War Two service. George H.W. Bush, the 41st President of the United States (1989-1993), was a TBM Avenger pilot assigned to Torpedo Squadron 51 (VT-51) aboard SAN JACINTO during the war.

SAN JACINTO was decommissioned on 1 March 1947 and reclassified as an aircraft transport (AVT-5) while in reserve on 15 May 1959. She was stricken on 1 June 1970 and sold for scrap on 15 December 1971.

A crewman stands above the captain on the bridge of USS MONTEREY (CVL-26) in late 1943. A canvas windscreen was placed forward of the captain's station, with a glass windscreen in front of the primary flight station. Circular loudspeakers for MONTEREY's public address system were placed on the island front and on the mainmast. (US Navy)

Crewmen relax on MONTEREY's port flight deck extension during operations in the Central Pacific in late 1943. All wartime US carriers – including the INDEPENDENCE class ships – had wood planked flight decks. Prongs were fitted to metal aircraft securing rails placed across the flight deck. These prongs held aircraft tie-down cables, which secured the aircraft to the flight deck. (US Navy)

An F6F Hellcat is launched from MONTEREY during operations off the Mariana Islands in June of 1944. The captain on the open bridge had a glass windscreen to protect against most winds and sea spray. The ship's hull number (26) was black on the dark blue flight deck. (US Navy)

SAN JACINTO heavily rolls and pitches in rough seas while en route to raid Okinawa with Task Force 38 on 6 October 1944. A metal windscreen was deployed across the flight deck to protect aircraft and crew from excessive wind over the deck. Tie-down cables were secured between the aircraft's landing gear and the securing rails across the flight deck. (US Navy)

Aircraft from MONTEREY's air group prepare to launch on a mission in late 1943. Two F6F fighters warm up their engines along the port flight deck edge. Flight crews aboard TBF torpedo-bombers prepare to start their engines, while deck crewmen stand by. INDEPENDENCE class carriers typically carried 24 F6Fs and nine TBFs during this period. (US Navy)

An F6F Hellcat recovers aboard USS COWPENS (CVL-25) in November of 1943. The fighter's tail hook successfully engaged one of the carrier's eight arresting cables ('wires'). Cable risers nicknamed 'fiddle bars' raised the cables above the flight deck, which allowed the tail hook to grab a cable. The Hellcat is fitted with a 150 gallon (567.8 L) centerline fuel tank. (US Navy)

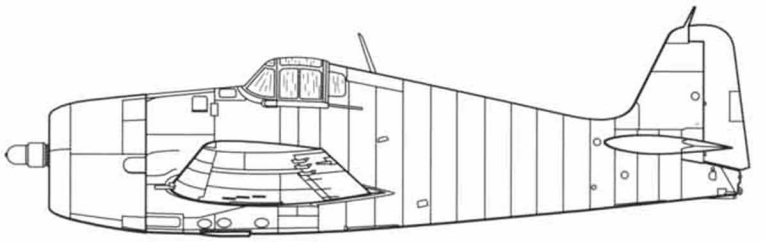
Carrier Aircraft

The INDEPENDENCE class carriers initially operated with the same air group of SBD Dauntless dive-bombers, TBF Avenger torpedo-bombers, and F6F Hellcat fighters as the larger carriers. The SBDs were quickly removed from light carrier service since their lack of folding wings caused serious handling and space problems in the carriers' small hangars. Thereafter, the class had a typical air group consisting of 24 Hellcat fighters and nine Avenger torpedo-bombers. On 5 August 1945, the need for additional fighter protection against kamikaze attacks resulted in an order changing light carrier air groups to 36 fighters, but the only carrier to actually change its air group over was CABOT, then at Eniwetok in the Marshall Islands.

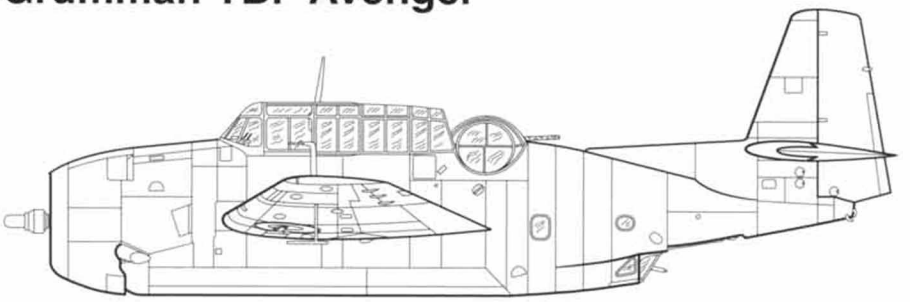
The CVLs' size caused numerous problems with air operations. The small ships pitched and rolled significantly more than the larger carriers, even in moderate seas. While launchings could be timed to minimize the risks, landings could not be so planned, resulting in a substantially higher accident rate. The small size of the hangars was a problem as well. The designers had landed the framing for the hangar on the main cruiser deck, rather than further outward on the added blister. This design feature resulted in an artificially narrower hangar deck.

During the postwar period, the INDEPENDENCE class light carriers operated numerous other aircraft in their various capacities. BATAAN operated Vought **F4U Corsairs** on combat missions during the Korean War. The French deployed F6F Hellcats, Curtiss **SB2C Helldivers**, TBM Avengers, and Corsairs from LAFAYETTE (formerly LANGLEY) and BOIS BELLEAU (formerly BELLEAU WOOD) off Indochina.

Grumman F6F Hellcat



Grumman TBF Avenger



A Grumman TBF Avenger torpedo bomber lands on board USS COWPENS in 1943. The aft aircraft elevator was outlined on the flight deck. A rare form of hull number – a small white 25 – was painted on the aft flight deck edge. INDEPENDENCE class light carriers normally had large black hull numbers painted on the forward and aft flight deck edges. (US Navy)

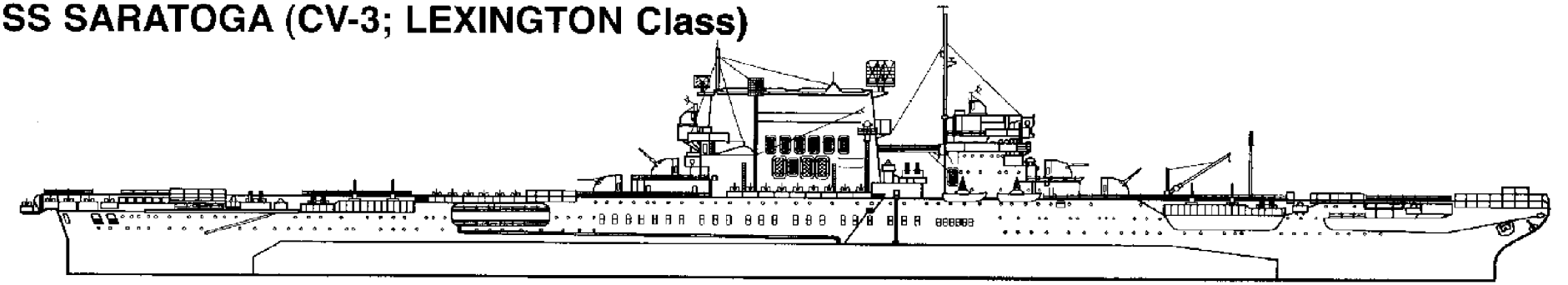
F6F-3 Hellcat fighters are spotted on the aft flight deck of COWPENS in late 1943. The carrier's aircraft flew in raids on the Marshall and Gilbert islands in November and December. The wings were unfolded just prior to the aircraft's launch. Cables for signal flags ran from the yardarm down the aft superstructure. (US Navy)

F6F Hellcat fighters warm up on COWPENS' flight deck in January of 1944. The carrier operated with Task Group 58.3 against Japanese installations in the Marshall Islands. The carrier's three crash barriers – designed to stop aircraft that failed to engage the arresting cables – were lowered across the mid-flight deck. (US Navy)

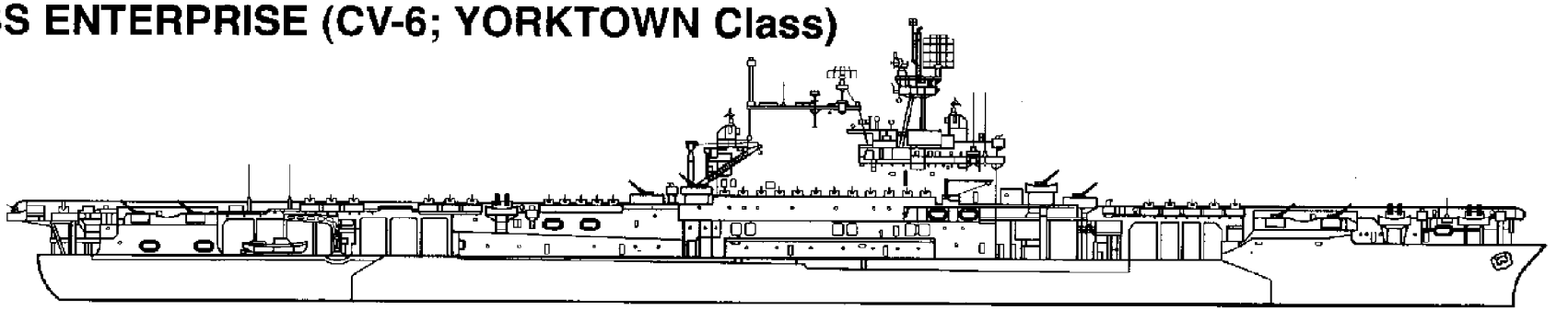
Several F6F Hellcats are lashed to the flight deck of LANGLEY (CVL-27) during a storm in January of 1945. The carrier operated with Task Group 38.3 in the South China Sea. (This task group was 58.3 when Task Force 38 was called Task Force 58 under Admiral Spruance.) The aft aircraft elevator was lowered, while a fence automatically raised around the opening prevented crewmen from falling into the hangar deck. (US Navy)

US Aircraft Carriers in the Pacific War, 1943-45

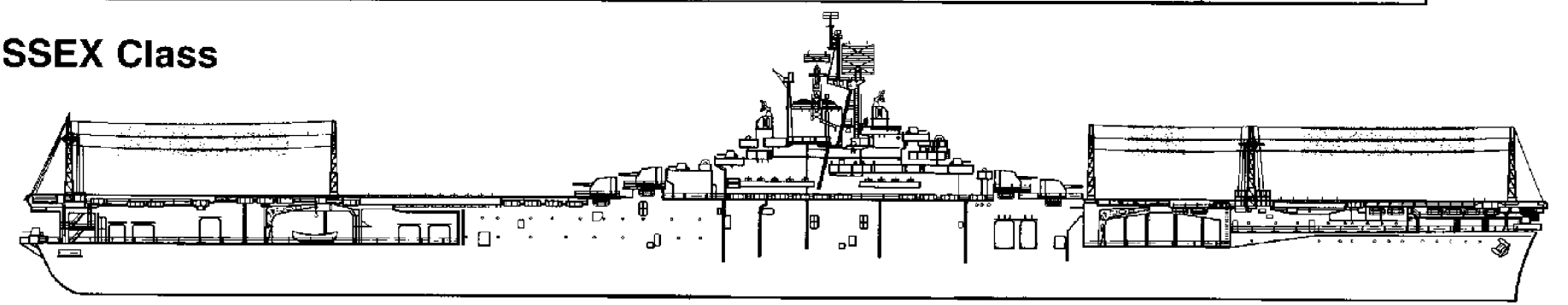
USS SARATOGA (CV-3; LEXINGTON Class)



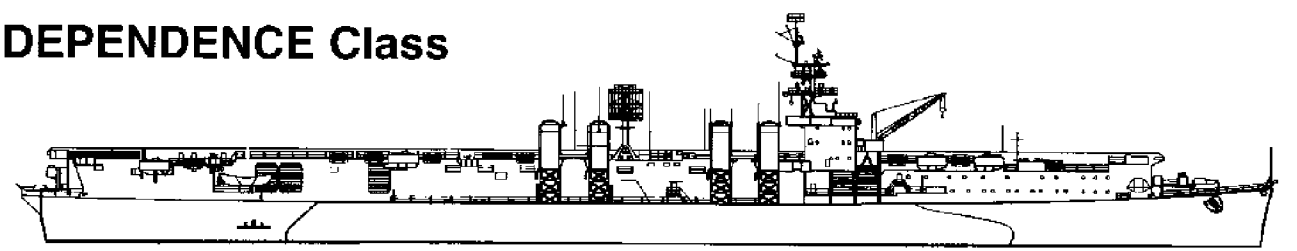
USS ENTERPRISE (CV-6; YORKTOWN Class)



ESSEX Class



INDEPENDENCE Class



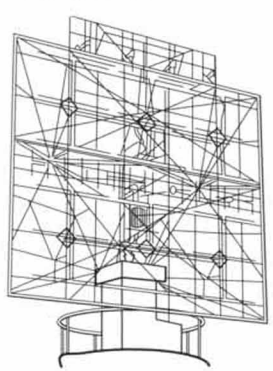
Radar

The relatively new innovation of radar (RAdio Detection And Ranging) by the British allowed US carrier forces in World War Two to detect incoming enemy air attacks far in advance. Radar also allowed the fleet to send fighters to the optimum point to intercept incoming air strikes. Carriers employed surface search radar to track ships and long range air search radar to warn of incoming aircraft. Fighter direction radar was used to send the carrier's Combat Air Patrol (CAP) to a position where it could intercept enemy aircraft. Radar also served as a homing beacon for returning 'friendlies' and a means for electronically identifying friendly versus unfriendly aircraft – usually referred to as Identification, Friend or Foe (IFF). US carrier tacticians learned from the breakdowns in radar control of the all-important CAP during the carrier battles of 1942. These tacticians implemented technological advances that allowed the carriers to operate much more effectively during the last two years of the war.

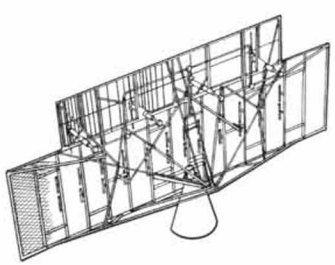
INDEPENDENCE entered service with two air search radars, a large SK set for long range air search on a stub mast in front of the second pair of funnels and the backup SK-2 system on the foremast. This wide separation between the two major radars actually gave the CVLs better radar performance than the larger carriers, where radars were concentrated on the island. An SG radar, also on the foremast, provided surface search. Homing beacons were provided by a YE antenna atop the foremast, while IFF antennas were mounted on the SK. The low-frequency, long range radio antennas were mounted on masts along the starboard side of the flight deck. These antennas were hinged to allow them to be lowered to a horizontal position during flight operations.

Beginning with an installation on INDEPENDENCE in early 1944, an SM height-finder set (originally designated CXBL) was added to the foremast in lieu of the backup SK-2. This height-finding capability was a major improvement, since it allowed the fighter director to vector the CAP to the proper altitude to intercept enemy aircraft. Other ships in the class received the lighter SP set. Some circular dishes had arcs removed from the top, bottom, or both. They were almost always fitted with the dipole antennas of the BO IFF system, which consisted of three parallel vertical rails mounted in front of or above the dish.

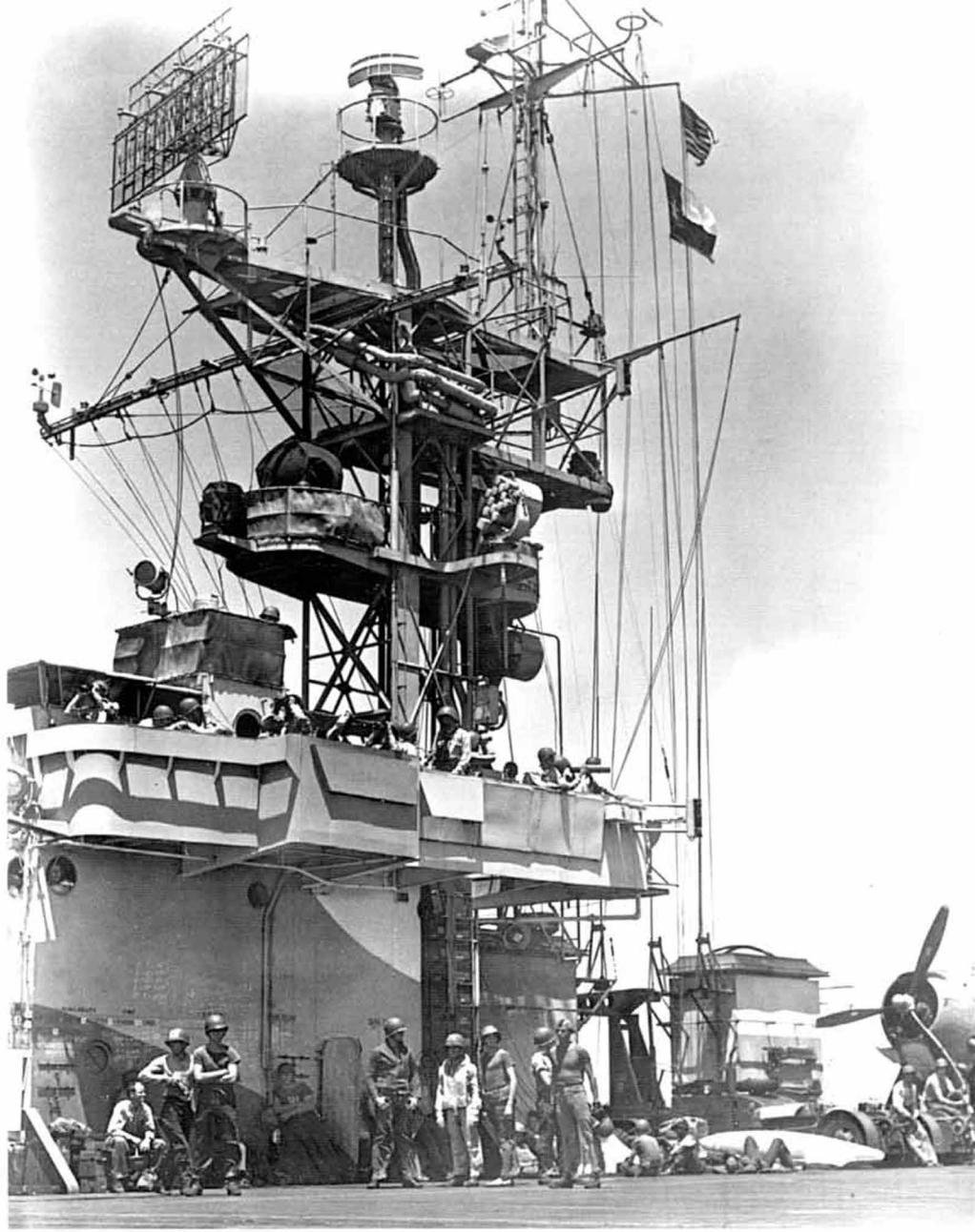
SK Radar Antenna



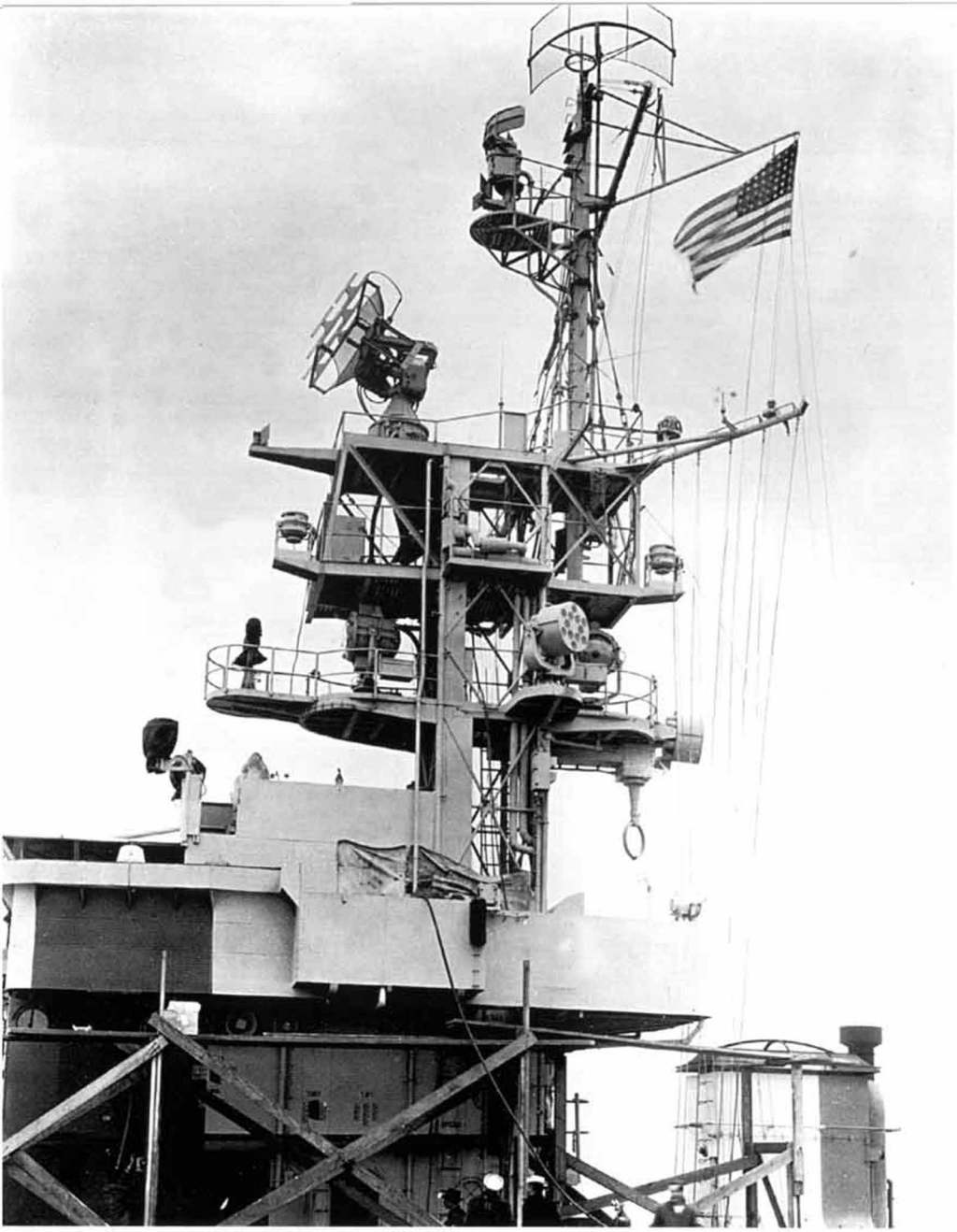
SK-2 Radar Antenna



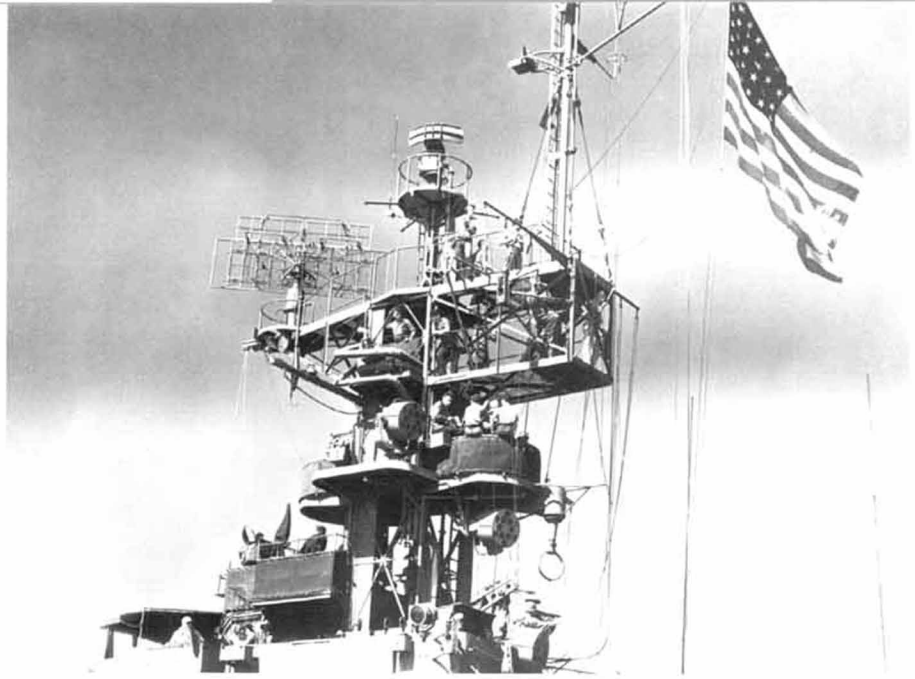
SG Radar Antenna



SAN JACINTO (CVL-30) entered service with the original INDEPENDENCE class foremast configuration. An SK-2 air search radar antenna was mounted on the foremast, with an SG surface search radar antenna aft and above the SK-2. A single yardarm was fitted to display signal flags. In recognition of her namesake 1836 battle in the Texas War of Independence, SAN JACINTO flew both the American and Texas flags from her mainmast. (Floating Drydock)

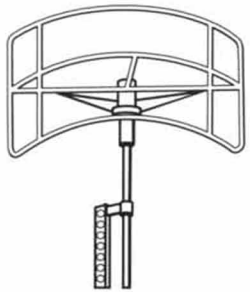


INDEPENDENCE (CVL-22) received the late war radar antenna installation during her 1944 refit at Hunter's Point, California. A YE homing beacon was mounted atop the foremast, while an SG antenna was fitted to a small platform immediately below the YE. The SM air search radar antenna replaced the SK-2 antenna on the foremast platform. (Floating Drydock)

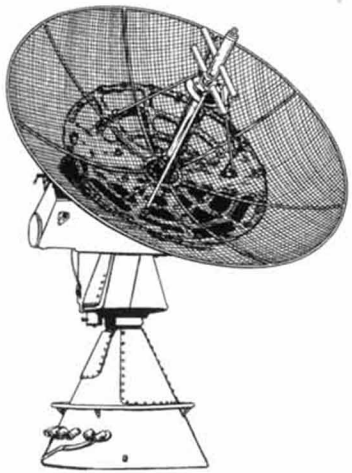


USS CABOT (CVL-28) is equipped with the typical original INDEPENDENCE class radar arrangement in October of 1944. The curved SG radar antenna on the raised circular platform searched for surface targets and hazards. Forward of and below the SG antenna was the SK-2 air search radar antenna. This served as a back-up to the SK main air search radar antenna, which was mounted near the funnels. (Floating Drydock)

YE Homing Beacon Antenna

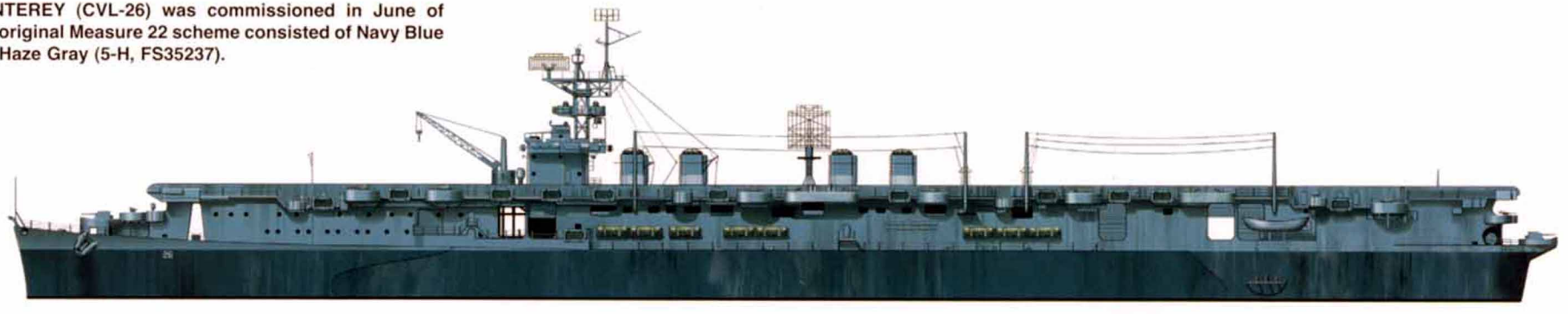


SM Fighter Control Radar Antenna

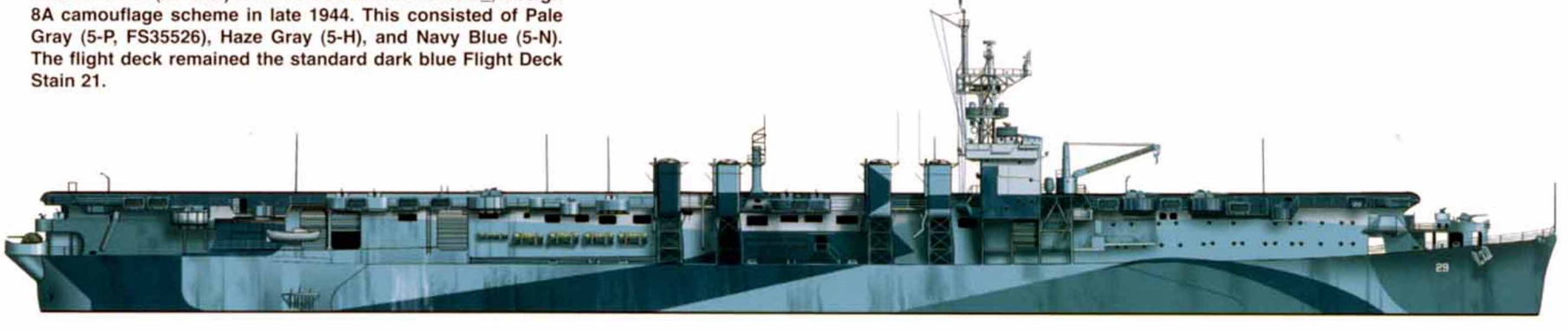


USS INDEPENDENCE (CVL-22) was the lead ship in her class of light aircraft carriers. She was camouflaged in overall Navy Blue (5-N, FS35044) with small white hull numbers at the bow when commissioned on 14 January 1943.

USS MONTEREY (CVL-26) was commissioned in June of 1943. Her original Measure 22 scheme consisted of Navy Blue (5-N) and Haze Gray (5-H, FS35237).

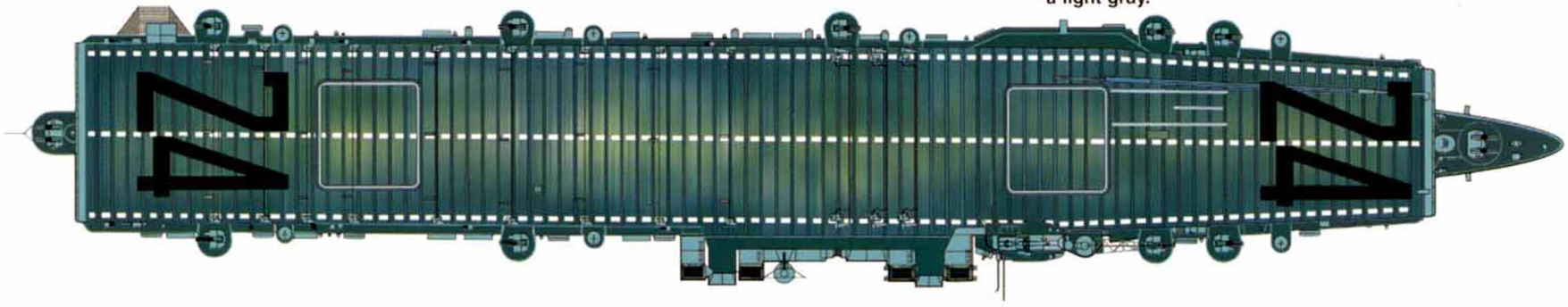


USS BATAAN (CVL-29) was finished in a Measure 3_, Design 8A camouflage scheme in late 1944. This consisted of Pale Gray (5-P, FS35526), Haze Gray (5-H), and Navy Blue (5-N). The flight deck remained the standard dark blue Flight Deck Stain 21.

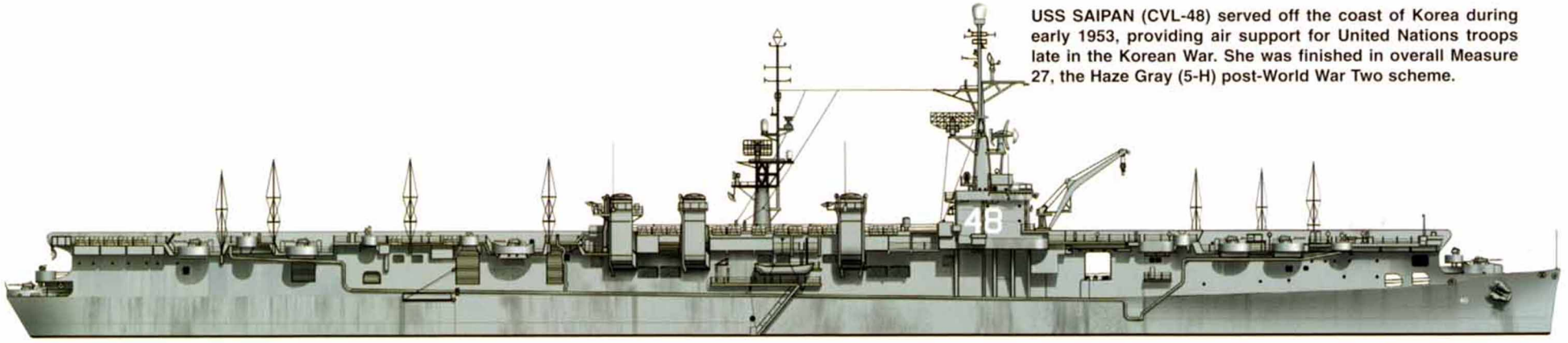


USS BELLEAU WOOD (CVL-24) was assigned to Task Group 38.4 of Task Force 38 in August of 1944. She was camouflaged in Measure 33, Design 3D, which used Navy Blue (5-N), Haze Gray (5-H), and Pale Gray (5-P).

In August of 1944, BELLEAU WOOD's wooden flight deck was stained Deck Blue Stain (20-B), which replaced the previously used Flight Deck Stain 21. Her metal horizontal surfaces were Deck Blue (20-B, FS35042), the hull numbers were Dull Black (BK, FS37040), and the guide lines were either white or a light gray.



USS SAIPAN (CVL-48) served off the coast of Korea during early 1953, providing air support for United Nations troops late in the Korean War. She was finished in overall Measure 27, the Haze Gray (5-H) post-World War Two scheme.



Armament and Fire Control

The typical INDEPENDENCE class carrier's armament consisted of 18 Swedish-designed 40MM Bofors anti-aircraft weapons in nine twin mounts, two 40MM quad Bofors guns mounted on the extreme bow and stern, and 16 Swiss-designed 20MM Oerlikon anti-aircraft weapons. INDEPENDENCE was initially equipped with two 5-inch (12.7 CM)/38 caliber DP (Dual Purpose – surface and air defense) guns mounted on the bow and stern for surface defense, which would have used the new VT (Variable Time) proximity fused shells. INDEPENDENCE was the only unit equipped with these 5-inch guns. The weapons were exchanged for the 40MM quad Bofors mounts immediately after her shakedown. The single mount Oerlikon weapons were gradually replaced with twin mount Oerlikons over the course of the war.

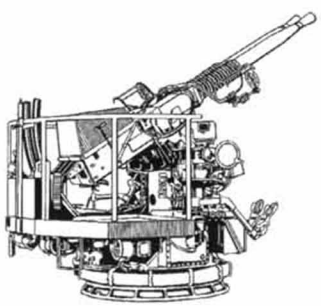
The 40MM Bofors gun had a muzzle velocity of 2890 feet (880.9 M) per second, a maximum range of 11,000 yards (10,058.4 M), and a ceiling of 22,800 feet (6949.4 M). The gun had a rate of fire of 160 rounds per minute (RPM), with ammunition supplied in four-round clips.

The 20MM Oerlikon gun's muzzle velocity was 2750 feet (838.2 M) per second. It had a maximum range of 4800 yards (4389.1 M) and a ceiling of 10,000 feet (3048 M). The weapon' rate of fire was 465 to 480 RPM and ammunition was supplied in 60-round drums.

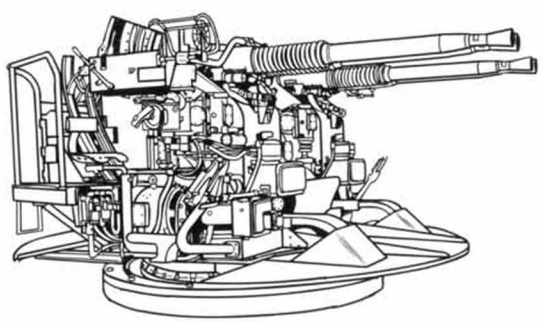
Anti-aircraft fire control was initially provided by seven Mark 51 directors with Mk 14 electric, lead-computing gun sights mounted adjacent to the 40MM quads and on the port and starboard gallery decks. During refits, some Mk 51 directors were replaced with Mark 57 directors equipped with Mark 29 radars. The radars provided more precise range data for the anti-aircraft gunners.

COWPENS (CVL-25) is berthed after her refit on 5 March 1945. The 20MM cannon and their tubs on the bow were deleted, leaving the quad mount 40MM weapon. Mounted along her starboard side gallery were two 40MM twin mounted cannon, a twin 20MM weapon, and a new Mk 57 director with Mk 29 radar. COWPENS was also equipped with a second catapult on the starboard flight deck side, along with a second yardarm on the foremast and updated radar antennas. (Floating Drydock)

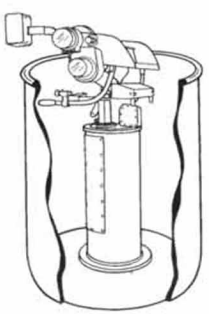
40MM Twin Mount



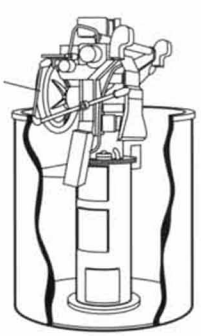
40MM Quad Mount



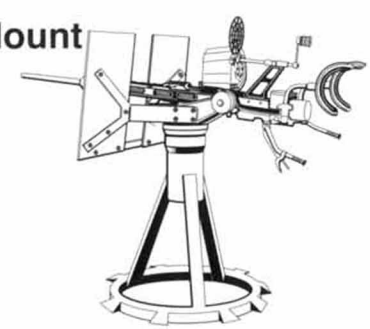
Mk 51 Director



Mk 57 Director



20MM Single Mount



20MM Twin Mount

Camouflage

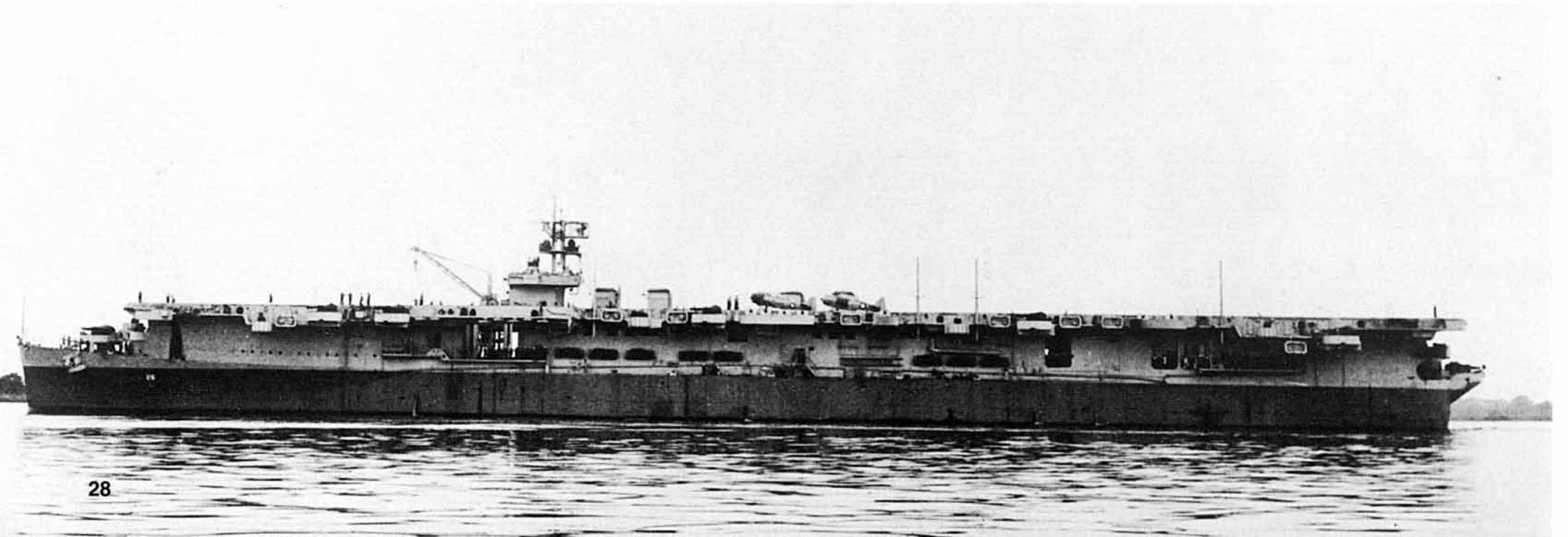
Six of the INDEPENDENCE class carriers entered service wearing the Measure 21 camouflage scheme, which consisted of overall Navy Blue (5-N, approximately FS35044) with Deck Blue (20-B, approx. FS35042) decks and walkways. Their flight deck markings varied somewhat, but generally consisted of blue Flight Deck Stain 21, with three white or light gray dashed lines and – later – Dull Black (BK, approx. FS37040) flight deck numerals.

MONTEREY (CVL-26) was completed in the Measure 22 scheme, which consisted of Navy Blue (5-N) up to the level of lowest point of main deck. The vertical surfaces above the main deck level were painted Haze Gray (5-H, approx. FS35237). Both BATAAN (CVL-29) and SAN JACINTO (CVL-30) were completed in a new type of 'dazzle' camouflage, which placed a pattern of dark and light shapes on the ships. The purpose was not to conceal the ships from enemy units, but to deceive them – especially enemy submarines – as to ship type, speed, and course. The dazzle camouflage patterns consisted of a Measure, which specified the paint colors, and a Design, which provided the pattern for the camouflage. The schemes drawn up for the INDEPENDENCE class ships were either an 'open' scheme, which did not specify colors, or Measure 33, which employed Navy Blue (5-N), Haze Gray (5-H), Pale Gray (5-P, approx. FS35526), and White (5-U, approx. FS37855). The white was used under overhanging areas to alter the appearance of shadows.

Two ships carried Measure 33, Design 3D, a destroyer design that was redrawn for light carriers. MONTEREY and BELLEAU WOOD (CVL-24) were repainted in this scheme at Pearl Harbor, Hawaii in July and August of 1944. The colors appear to have been the usual Measure 33 colors of Navy Blue (5-N), Haze Gray (5-H), and Pale Gray (5-P). Three ships carried Measure 33, Design 7A: PRINCETON (CVL-23), COWPENS (CVL-25), and SAN JACINTO. Both PRINCETON and SAN JACINTO used Navy Blue (5-N), Haze Gray (5-H), and Pale Gray (5-P), although COWPENS appears to have substituted Dull Black (BK) for Navy Blue. SAN JACINTO was commissioned in this scheme, while PRINCETON was painted it in either January or May of 1944, and COWPENS in August of 1944. INDEPENDENCE (CVL-22) and BATAAN (CVL-29) carried a Measure 3_, Design 8A camouflage scheme (the '3_' indicated an 'open' measure). INDEPENDENCE used Navy Blue (5-N), Ocean Gray (5-O, approx. FS35164), and Light Gray (5-L, approx. FS36320) after her refit in June of 1944. BATAAN appears to have used the more typical Pale Gray (5-P) and Haze Gray (5-H) with Navy Blue (5-N) when she was repainted in October of 1944. CABOT (CVL-28) was the only INDEPENDENCE class carrier never to wear any pattern other than Measure 21, although LANGLEY came close – wearing only Measures 21 and 12.

With the advent of the Japanese *kamikaze* ('Divine Wind') suicide aircraft in late 1944, Measures 21 and 12 made a strong comeback when carriers, and indeed all vessels, sought to reduce their visibility to aerial observers. Both MONTEREY and BELLEAU WOOD were repainted in Measure 21 in January of 1945 during their refits at Bremerton, Washington and Hunters Point, California. PRINCETON was sunk while painted in her dazzle camouflage, but a Measure 21 scheme was applied to SAN JACINTO sometime after March of 1945 and COWPENS in March of 1945 at Mare Island, California.

MONTEREY (CVL-26) is underway in the Delaware River in June of 1943, soon after her commissioning. She was painted in her original Measure 22 camouflage scheme. This scheme used Navy Blue (5-N) up to the level of the lowest main deck level, with Haze Gray (5-H) above this point. A small white hull number was painted on the hull. The waterline boot topping was black. Wartime censors removed MONTEREY's radar antennas from the photograph. (US Navy)

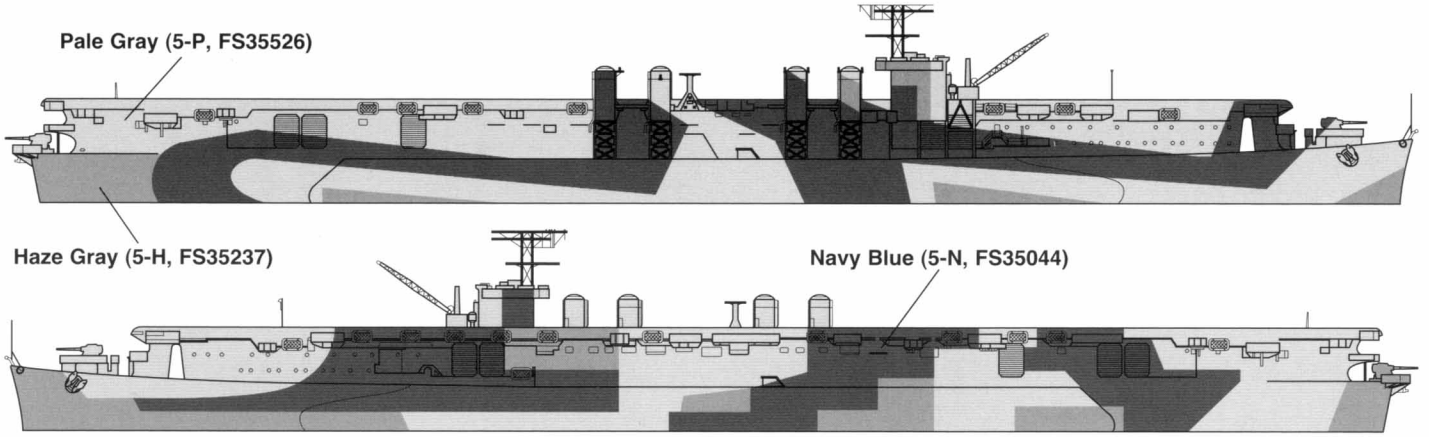


(Above) BATAAN (CVL-29) cruises in the Delaware River near the Philadelphia Navy Yard on 2 March 1944. She was finished in Measure 3__, Design 8A, a disruptive pattern of Navy Blue (5-N), Pale Gray (5-P), and Haze Gray (5-H). Her full complement of F6F Hellcats and TBF/TBM Avengers was parked on the flight deck. The hull number on the bow was white. (US Navy)

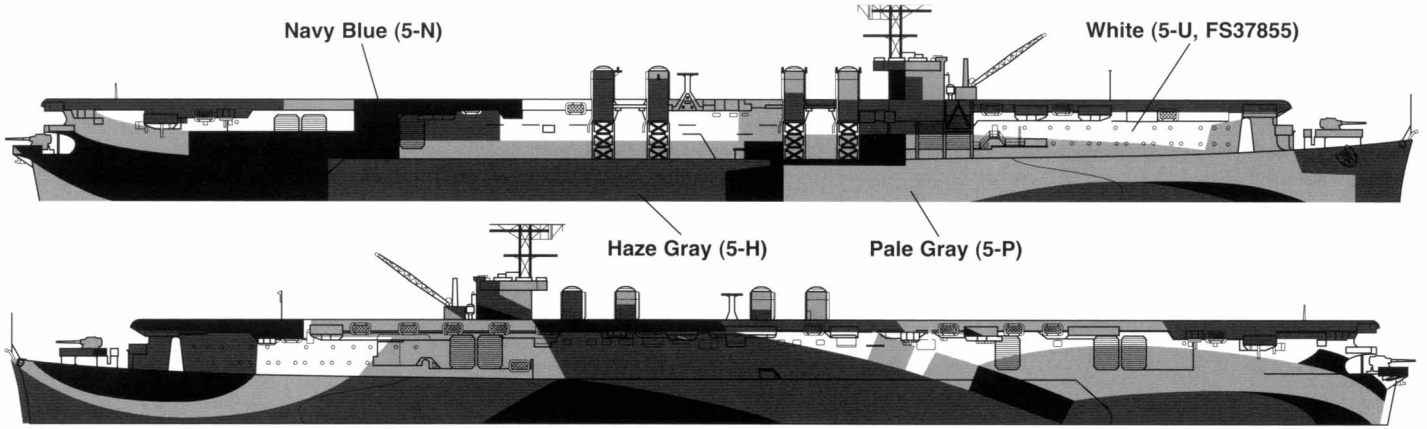
(Below) SAN JACINTO (CVL-30) is underway off the US East Coast near Norfolk, Virginia on 23 January 1944. She was painted in Measure 33, Design 7A, which used Navy Blue (5-N), Haze Gray (5-H), and Pale Gray (5-P). The flight deck was Flight Deck Stain 21, a dark blue, with black hull numbers on the flight deck. A North American SNJ trainer was spotted aft of the raised windscreen. (US Navy)

INDEPENDENCE Class Camouflage Schemes

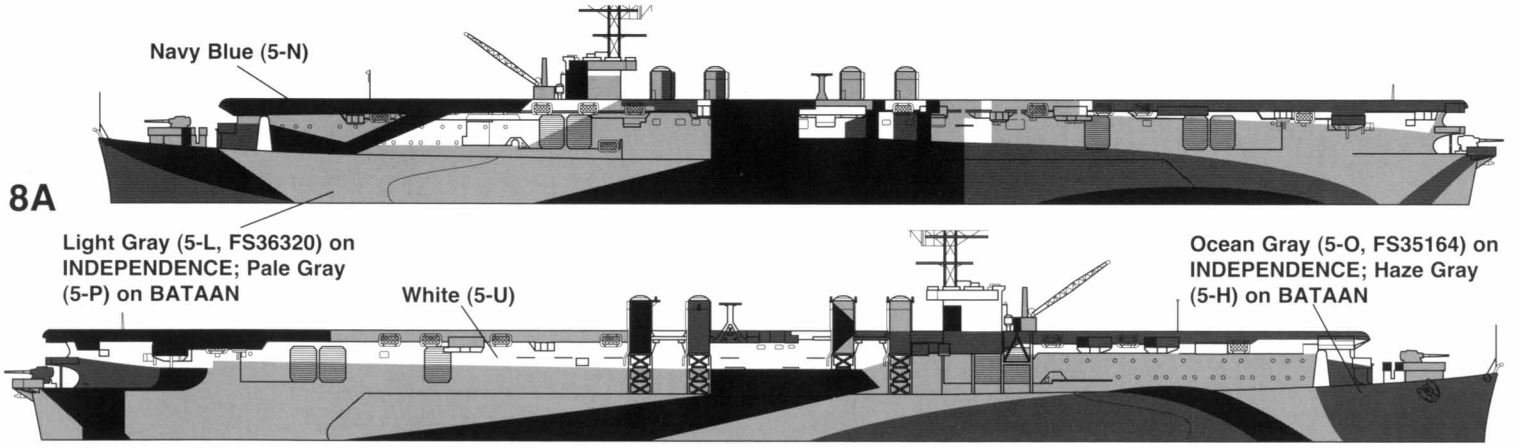
Measure 33, Design 3D (MONTEREY, BELLEAU WOOD)



Measure 33, Design 7A (PRINCETON, COWPENS, SAN JACINTO)



Measure 3_, Design 8A (INDEPENDENCE, BATAAN)


Navy Blue (5-N)
Light Gray (5-L, FS36320) on INDEPENDENCE; Pale Gray (5-P) on BATAAN
White (5-U)
Ocean Gray (5-O, FS35164) on INDEPENDENCE; Haze Gray (5-H) on BATAAN

NOTE: All Federal Standard (FS) color numbers are approximate.

Combat

1943

INDEPENDENCE (CV-22) went through a shakedown period in the Caribbean following her commissioning on 14 January 1943. She arrived at San Francisco on 3 July 1943, then departed for Pearl Harbor, Hawaii on 14 July for training exercises with ESSEX (CV-9). On 15 July 1943, the light carriers' previous CV designation was changed to CVL, which denoted their 'light' status, although they retained the same numbering scheme as the larger carriers. ESSEX and INDEPENDENCE were soon joined by the new **YORKTOWN** (CV-10), the new **LEXINGTON** (CV-16), and the new CVLs PRINCETON (CVL-23) and BELLEAU WOOD (CVL-24). Barely six months earlier, the US Pacific Fleet had only one serviceable carrier, the battered ENTERPRISE (CV-6). When YORKTOWN sortied from Pearl for her first action on 22 August, the signaling tower on Ford Island flashed: *"You look good out there, honey."*

The Raids – Marcus, Tarawa & Wake

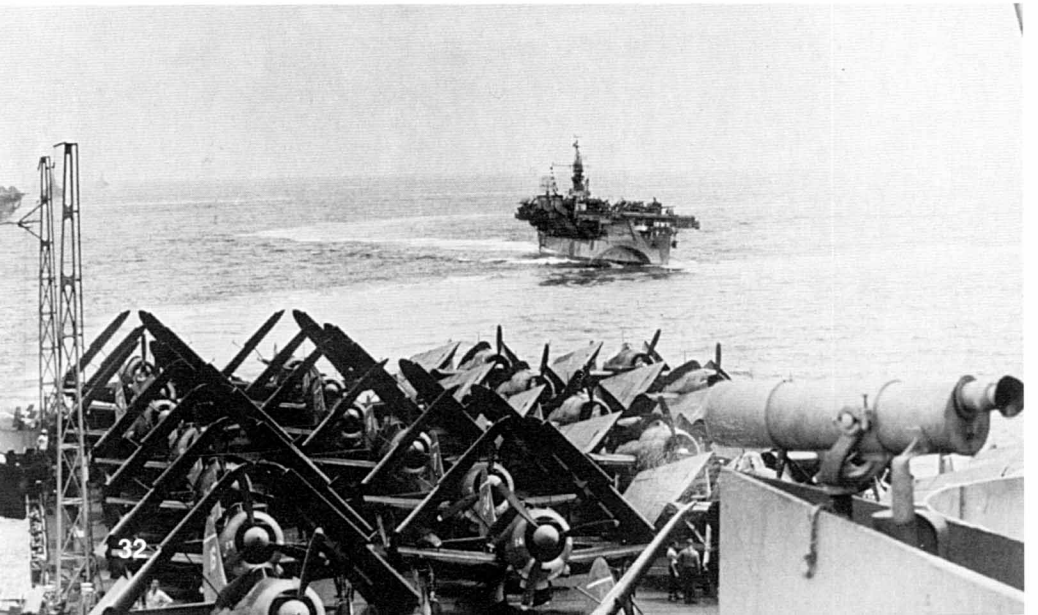
The question of how to best use the new carriers confronted Admiral Chester Nimitz, Commander in Chief, Pacific Fleet and Pacific Ocean Areas, throughout the summer of 1943. He embarked on a series of training raids in an attempt to resolve some of the issues. The new carriers saw their first action on 31 August 1943, when ESSEX, YORKTOWN, and INDEPENDENCE – commanded by Rear Admiral Charles A. Pownall – raided Marcus Island. This first strike taught several lessons, including the benefits of operating three carriers (two CVs and one CVL) in a circular formation that maximized anti-aircraft (AA) defense. Other lessons included predawn launches to support airstrikes, stationing submarines to rescue pilots shot down over the target, and ship-to-aircraft communications using the new four-channel Very High Frequency (VHF) voice radio sets. Pownall also recommended that CVLs only carry fighters, a recommendation that would be adopted two years later. Following the attack, INDEPENDENCE returned to Pearl Harbor, while ESSEX and YORKTOWN sped to San Francisco to pick up men and supplies. While Pownall was away, Rear Admiral Willis 'Ching' Lee took Task Force 11 (TF 11) with PRINCETON and BELLEAU WOOD to Baker Island on 25 August. The CVLs provided air cover during the occupation of Baker and the construction of an airfield there.

Pownall's next objective was to soften up installations on Tarawa and Makin in the Gilberts in anticipation of US landings. TF 15's attacks on 18-19 September did little towards crippling Japanese defenses, but provided invasion planners with needed reconnaissance of the landing areas and new carrier crews with experience in air operations. On 5-6 October, Rear Admiral Alfred E. Montgomery's six carriers – including INDEPENDENCE, BELLEAU WOOD, and the new COWPENS (CVL-25) – attacked isolated Wake Island. This operation combined air strikes with a cruiser bombardment covered by two of the CVLs. Japanese fighter cover provided the new F6F Hellcat pilots with a taste of battle and confirmed that US pilots had a fighter vastly superior to the old F4F Wildcat. The circular carrier formation worked well and light carriers proved that use of deck catapults greatly improved flight operations. Submarines rescued six of 11 downed pilots, despite the lack of VHF radios or fighter cover for the sub. Montgomery's report noted the disturbingly high aircraft losses due to the relatively poor state of carrier training, but Nimitz decided to end the training raids. He proceeded with the long-

BELLEAU WOOD (CVL-24) steams in the Central Pacific on 22 December 1943. Her forward aircraft elevator is lowered to the hangar deck. The carrier's aircraft first saw action against Japanese forces on Baker Island, east of the Gilberts, in August of 1943. BELLEAU WOOD also supported air strikes on Japanese installations in the Marshall Islands in early December. (US Navy)

An INDEPENDENCE class light carrier lies at anchor in the foreground at Majuro Atoll in the Gilberts on 25 April 1944. This and other Fifth Fleet vessels soon left Majuro to attack the Marianas. Two other INDEPENDENCE class light carriers were berthed at this atoll, with four ESSEX class fleet carriers, the USS ENTERPRISE (CV-6), and other US warships. (US Navy)

SAN JACINTO (CVL-30) steams aft of USS ESSEX (CV-9) during maneuvers in the central Pacific on 27 May 1944. Curtiss SB2C Helldivers and Grumman F6F Hellcats crowd ESSEX's flight deck. The Task Force 58 carriers conducted joint exercises prior to Operation FORAGER – the Marianas invasion the following month. (US Navy)



awaited drive across the Central Pacific. This used the Fifth Fleet's carriers to destroy Japanese air and naval power and the new concept – untried in battle – of amphibious assaults using Marine units and close air support.

Before the scheduled attacks on the Gilberts took place, Nimitz reluctantly loaned INDEPENDENCE, PRINCETON, and three other carriers to Vice Admiral William 'Bull' Halsey's carrier-shy Third Fleet. TF 38 sent its aircraft against airfields at Buka and Bonis on Bougainville on 1-2 November, which reduced Japanese aerial resistance during the landings at Empress Augusta Bay. The next target was the Japanese base at Rabaul, which was hit on 5 and 11 November. US carriers came under heavy attack after launching strikes against Rabaul on 11 November, but emerged undamaged. They destroyed most of the Japanese carrier fleet aircraft which had similarly been 'loaned' to Rabaul.

Operation GALVANIC – The Invasion of the Gilberts

On 19 November 1943, six heavy and five light carriers, including the new MONTEREY (CVL-26), began air attacks on Japanese installations during Operation GALVANIC, the invasion of the Gilbert Islands. Task Force 50's fleet carriers had a dual mission – neutralize Japanese airfields and other defenses, and engage the Japanese fleet should it attempt to defend the islands. The Japanese decision to drain aircraft away from the Gilberts, Marshalls, and Wake to support Rabaul now meant that there would be no serious naval or air opposition for the attacking American forces. A Japanese submarine sank the escort carrier **LISCOMBE BAY** (CVE-56), which was tied down providing air cover for the beachheads. The large carriers were restricted to their station within 100 miles (160.9 KM) of Tarawa and Makin, against the advice of experienced aviators. The carriers were attacked by the few Japanese aircraft left in the Marshalls. A torpedo hit and seriously damaged INDEPENDENCE during a Japanese counterattack on 20 November. She returned to San Francisco for repairs that kept her out of the war for approximately seven months. On 4 December, Pownall took COWPENS, BELLEAU WOOD, and four CVs to soften up Kwajalein and Wotje in the Marshalls. TF 50 did not destroy all the Japanese aircraft with its first strike, but Pownall refused to launch a second strike. LEXINGTON took a torpedo aft that evening when the surviving Japanese bombers struck back at the carriers.

Pownall's lack of aggressiveness was demonstrated on this mission. His tendency to emphasize defensive strategies – which made the thin-skinned carriers vulnerable to Japanese land-based aircraft – over the carriers' striking capabilities, cost him his job as carrier commander. Nimitz replaced Pownall with Rear Admiral Marc A. Mitscher, the veteran pilot who had commanded HORNET (CV-8) during the Doolittle Raid on Japan and the Battle of Midway. He later led Guadalcanal's shore-based aircraft. Under Mitscher's aggressive leadership from 13 January 1944 to August of 1945, Task Force 58 – as TF 50 was renamed – became the most powerful and most self-sufficient naval force in history.

1944

Operations FLINTLOCK and CATCHPOLE – The Invasion of the Marshalls

At the beginning of 1944, US strategy in the Pacific called for two parallel drives to blockade the Japanese home islands. The aim was to cut off Japan's access to raw materials through the Formosa-Luzon-China bottleneck. The first drive was by General Douglas MacArthur in

the Southwest Pacific and had the Philippines as its goal. The second drive was the Nimitz-led Central Pacific offensive, which was intended to end up in Formosa or China. After a brief rest at Pearl, TF 58 weighed anchor again, with LANGLEY, CABOT, and the new **INTREPID** (CV-11) more than replacing the repairing LEXINGTON and INDEPENDENCE. While the next landings had been set for the islands of Wotje and Maleolap in the Marshalls, aerial reconnaissance photos over Kwajalein showed an airstrip. Once seized, it could be used to batter the other two islands and allow the carriers to retire shortly after the landings. Since 'leapfrogging' past the two islands would cut several weeks from the expected duration of the Pacific offensive, and hence the war, Nimitz chose to strike directly at Kwajalein.

Rather than the defensive role the carriers had played in the Gilberts invasion, Mitscher intended an offensive strategy of predawn fighter sweeps aimed at destroying enemy aircraft on the ground. This assured control of the skies over both the beaches and the task force. Mitscher hit Roi, Taroa, and Wotje airfields for two days prior to the landings on 31 January, until no Japanese aircraft remained to oppose the invasion. Mitscher's carriers then stayed at the invasion site as long as necessary to support the landings, since the nearest Japanese aircraft at Eniwetok and Wake could not reach his ships. An improved preinvasion bombardment scheme and better amphibious assault tactics allowed the successful invasions of the island with much less loss of life by the Marine ground forces. The unneeded reserves were sent to the next target, Eniwetok, which was assaulted ahead of schedule on 19 February 1944. Four CVLs and two CVs provided air cover.

Following the Kwajalein and Eniwetok raids, Mitscher did not make the 4000-mile (6437.2 KM) round trip back to Pearl Harbor. He proceeded instead to remote Majuro Atoll to resupply from the shuttling tankers, supply ships and escort carriers of Service Squadron 10. This strategy of utilizing a floating logistical base allowed the carriers to strike new targets much more quickly.

Truk

The next target in the Central Pacific advance was the feared Japanese base at Truk in the Carolines, about which little was known. TF 58 was ordered to attack the atoll to provide information to invasion planners and to neutralize land-based aircraft that might interfere with landings at Eniwetok. Truk proved less well defended than American commanders suspected. It had modest coastal defenses, inadequate AA batteries, small airstrips, and minor naval facilities. Nonetheless, the fliers from BELLEAU WOOD, COWPENS, CABOT, MONTEREY, and five CVs feared the worst when they sortied on 17 February. The Japanese Combined Fleet was not anchored at Truk as anticipated having left shortly after a US reconnaissance aircraft had been spotted two weeks earlier. The US flyers found a large contingent of merchant shipping and a large number of aircraft.

Mitscher's attack began with a predawn sweep of 72 Hellcats, followed by hourly strikes for two days. An overly complicated chain of command caused the Japanese commander – warned that Mitscher's carriers were coming – to launch only 80 fighters and only half of these intercepted the Americans. US pilots destroyed approximately 150 aircraft on the ground, along with 13 warships and 34 merchantmen. The Japanese counterattack with a night raid that slipped past the carriers' night fighters. A torpedo hit INTREPID, which left CABOT to provide air cover for the task force. On the way back from Truk, Mitscher detailed his remaining carriers to attack the Marianas. The carriers were spotted the day before the attack and had to fight their way in. Fortunately, TF 58's radar-directed AA fire drove off the attackers and the

SAN JACINTO steams with elements of Task Force 58 near the Marianas on 13 June 1944. The ESSEX class carrier USS LEXINGTON (CV-16) cruises off SAN JACINTO's port quarter, while a FLETCHER class destroyer steams in the background. All INDEPENDENCE class CVLs except INDEPENDENCE – away for repairs – participated in the subsequent Battle of the Philippine Sea. (US Navy)

MONTEREY turns hard to port to avoid Japanese air attacks off Saipan on 26 June 1944. Off the stern, a Japanese bomb narrowly missed the ESSEX class USS WASP (CV-18). Dark puffs in the distance are explosions from US anti-aircraft shells fired above the task force. The vertical lines are signal halyards running down from the yardarm. (US Navy)

USS COWPENS cruises in the western Pacific on 31 August 1944. She and the rest of Task Group 38.1 departed Eniwetok in the Marshalls three days before to attack the Palaus. Approximately half of her air group is spotted on the flight deck with wings folded aft. COWPENS was finished in the Measure 33, Design 7A camouflage scheme. USS INDEPENDENCE, lead ship of her class, steams in the background. (US Navy)

carriers escaped damage. Aided by overcast weather, the US forces destroyed 101 aircraft on the ground and another 67 in the air for minor losses. The carriers returned to Majuro to prepare for the next operation.

Mitscher's raids on Truk and the Marianas were the Pacific Fleet's best performance yet and resulted in the Japanese decision to abandon the air defense of Rabaul, withdrawing its aircraft to Truk. On the American side, Mitscher's stellar performance resulted in his being promoted commander of all the fast carriers. It also meant that the proposed invasions of Truk or the Marianas could be moved up from July for Truk and October for the Marianas to June for either. It also marked the final action before a decision had to be made whether to commit TF 58 to the Central Pacific strategy, which next required seizing the Marianas, or to General MacArthur's New Guinea-Philippines strategy. The decision was finally made not to invade Truk, but to take Saipan, Tinian, and Guam in the Marianas. First, the carriers were to help MacArthur take the town of Hollandia in Dutch New Guinea.

The Carolines and Hollandia

For MacArthur's leapfrogging advance to Hollandia to succeed, TF 58 had to neutralize Japanese air defenses in the western Caroline Islands. Rear Admiral Raymond Spruance prepared an attack plan utilizing three carrier groups to attack the Carolines, including the Palaus group that the Japanese Combined Fleet was using as an anchorage.

The attacks began when ENTERPRISE and BELLEAU WOOD covered the occupation of Emirau. On 23 March, TF 58 – including the new **HORNET** (CV-12) and the repaired LEXINGTON – sortied from Espiritu Santo in the New Hebrides. Two Japanese night torpedo attacks against the US carriers proved unsuccessful. On 30 March, TF 58 executed Operation DESECRATE ONE, three days of air strikes designed to destroy aircraft, airfields, and shipping in the Palaus. The forewarned Japanese fleet had slipped away. The carriers returned to Majuro in the Gilberts to replenish and – joined by the new CVL BATAAN (CVL-29) – headed south to soften up the Japanese base at Hollandia and engage the Japanese fleet if it offered battle. Three days of strikes on airfields already wrecked by the US Fifth Air Force ensued, with still no sign of the Japanese fleet. On the way back, Nimitz ordered Mitscher to again hit Truk to destroy built-up Japanese air strength, which effectively finished it as a major airfield.

Operation FORAGER – The Battle of the Philippine Sea

By the summer of 1944, the Imperial Japanese Navy's refusal to join battle had allowed it to replenish its land-based air units and rebuild its carrier strength. While the training of its new pilots was inadequate, Japan now had a fleet that – at least on paper – could hope to engage Task Force 58. On the American side, several of the carriers rotated in new air groups. The fleet added three more carriers, including the ninth and final CVL, SAN JACINTO (CVL-30). The decisive carrier battle that both sides sought began on 6 June 1944, when TF 58's 15 fast carriers departed from Majuro. Only **SARATOGA** (CV-3), being refitted as a night carrier, and INTREPID and INDEPENDENCE – both under repairs – would miss the battle. Mitscher began by destroying airfields and land-based aircraft on the Marianas on 11-12 June, and shore facilities on 13-14 June. To prevent the Japanese from shuttling aircraft to the Marianas via the

Bonins, Mitscher dispatched Rear Admiral J.J. 'Jocko' Clark with two of TF 58's four task groups, including PRINCETON and LANGLEY. These groups attacked air bases in the Bonins on 15-16 June.

Meanwhile, Vice Admiral Jisaburo Ozawa aboard the new Japanese carrier **TAIHO** weighed anchor on 15 June. His ships, including nine carriers filled with highly volatile unrefined crude oil, were ordered to engage the US fleet. Ozawa's initial plan to strike the US carriers from long range before they could hit him succeeded, since Spruance repeated the mistakes of the Gilberts operation. He maintained a fixed position near the Marianas to protect the landings, rather than release Mitscher's carriers to seek out and destroy the Japanese fleet. On 19 June, Ozawa's forces launched 372 aircraft to attack the stationary American carriers; however, his strategic advantage went for naught. The 450 defending Hellcats and fierce AA fire destroyed approximately 300 Japanese attackers, while the US lost 29 aircraft and sustained minor damage to two carriers and a battleship. The US called this engagement the 'Great Marianas Turkey Shoot.' US submarines sank TAIHO and the veteran carrier **SHOKAKU** that afternoon, with both losses attributed to the volatile fuel oil and poor damage control.

Late the next afternoon, the 12 US carriers launched an extreme long-range attack on the Japanese fleet. With sunset nearly on them and fuel running low, the attacks were not organized or effective. The exception was BELLEAU WOOD's torpedo bombers, which attacked and sank the carrier HIYO. The remaining carriers' air units damaged three other carriers and two tankers, the latter of which were later scuttled. While the Japanese carriers escaped TF 58's aircraft, the last of the carefully hoarded Japanese aircrews were now gone. This effectively ended the Japanese carriers' offensive capability for the rest of the war. Flying home in darkness and on empty fuel tanks, the US aircraft had difficulty finding their carriers to land safely. Mitscher ordered the carriers' landing lights turned on – a standard nighttime landing practice. He also had searchlights turned on and ordered destroyers to fire starshells, at the risk of attracting lurking Japanese submarines and aircraft. This gave hundreds of pilots an opportunity to land safely on their home carriers and assisted in recovering many pilots and aircrew forced to ditch during the long flight back.

The Fifth Fleet stayed at the Marianas to support the landings on Tinian and Guam, while Clark's task group attacked Iwo Jima. In early August, the fleet retired to rest and replenish for two weeks at the new advanced base at Eniwetok. The newly repaired INDEPENDENCE, now designated a night carrier, was also deployed to Eniwetok. The fleet also underwent another organizational change. The unrelenting pace of operations did not allow Spruance, Mitscher, and their staffs to proper plan the fleet's activities. In May of 1944, it had been decided that while the ships would remain on the attack, the fleet's command structure would change to a 'two platoon' system. On 26 August, Third Fleet commander Admiral Halsey and his designated carrier commander Rear Admiral John S. 'Slew' McCain were designated to replace Spruance and Mitscher. The latter two rotated back to Pearl to plan the next phase of the offensive. During Halsey's tenure, the Fifth Fleet became the Third Fleet and the fast carrier force was renamed Task Force 38 (TF 38). Since Mitscher had only been on duty for seven months, it was decided to leave him in place for the Philippines operation, with McCain to serve as one of the task group commanders. Mitscher's presence was superfluous, since Halsey acted as his own carrier commander. This was especially true during the Philippine campaign, where the fast carriers were the only element of the Third Fleet at Halsey's disposal. The remaining naval elements were part of the Seventh Fleet, under MacArthur's control through Vice Admiral Thomas Kincaid.

On 28 August, Halsey's carriers sortied from Eniwetok to support landings at Peleliu and

Flight deck crewmen aboard BELLEAU WOOD fight a fire caused by a kamikaze hit off the Philippines on 30 October 1944. While some crewmen train hoses on the fire, others move undamaged TBM bombers away from the flames. USS FRANKLIN (CV-13) was also hit by a kamikaze during this attack and burns in the background. (US Navy)

Morotai. More importantly, they began a ten-week campaign before the landings in the Philippines to try to reduce the substantial land-based air assets the US commanders expected the Japanese to have in and around the Philippines. It began with strikes again at Iwo Jima and Chichi Jima on 31 August-2 September, during which a young torpedo bomber pilot from SAN JACINTO named George Bush was shot down, but rescued by a US submarine. (Bush served as the 41st President of the United States from 1989 to 1993.) MONTEREY's aircraft raided Wake and other carriers hit the Palaus, but it soon became apparent that the Japanese land-based air threat was nowhere near as substantial as thought. Plans were hastily revised to skip the preliminary landings at Mindanao and proceed directly to invade Leyte, ten weeks ahead of schedule. The Navy also dropped plans to invade Formosa, since ground troops could not be brought from Europe as planned on the advanced schedule; however, Formosa still had to be neutralized as a source of land based air power. On 12 October 1944, Halsey's carriers sortied from yet another new floating base at Ulithi against Okinawa, Formosa, and Iwo Jima to draw out and destroy aircraft that might have otherwise been used to oppose the landings. The Japanese unwisely committed their inadequately trained carrier aircrews to this battle, which ended with over 600 Japanese aircraft destroyed, no damage to the US carriers, and 79 US aircraft lost. Two US cruisers were damaged, and were sent back for repairs escorted by CABOT and COWPENS. The carriers had now cleared the way for the invasion of the Philippines.

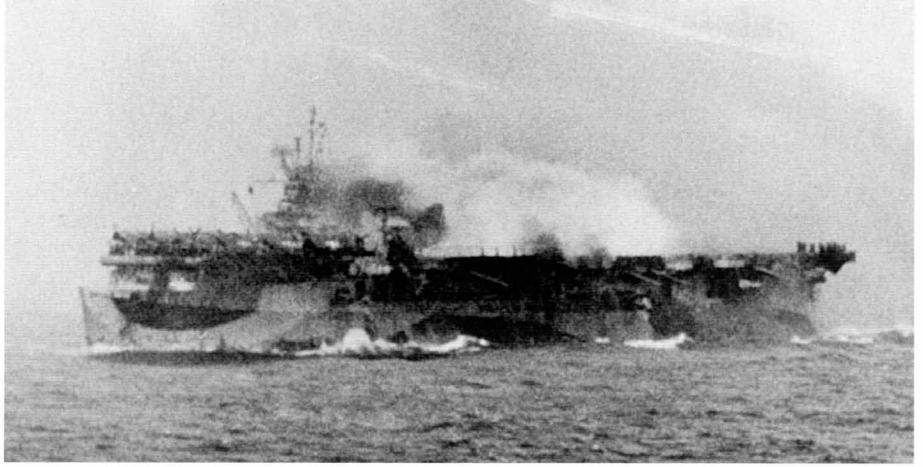
An F6F Hellcat recovers aboard USS LANGLEY during flight operations in the vicinity of Nansei-Shoto off the China coast on 10 October 1944. A canvas windscreen is placed in front of the Landing Signal Officer (LSO) position on the port after flight deck edge. The LSO used brightly colored paddles to guide the pilots during recovery operations. (US Navy)

The Battle for Leyte Gulf

On 20 October 1944, US forces landed on the Philippine island of Leyte. The Japanese counterattack was hastily revised from the carrier battle Japanese admirals had not thought would occur until November. Lacking aircraft, the carriers were to be used to lure TF 38 away from the beachheads and allow two separate groups of Japanese surface units to attack the exposed invasion fleet. Rather than commit their land-based aircraft to provide cover for the surface units, the Japanese plan called for these aircraft to attack TF 38. These attacks began the series of battles that became known as the Battle for Leyte Gulf.

The Loss of PRINCETON

On 24 October 1944, PRINCETON and other Task Group 38.3 elements were supporting the landings by attacking Japanese airfields on Luzon. The fleet's air defenses operated well at first, with attacking planes routinely shot down or driven off. At 0938 hours, a lone Japanese dive bomber scored a direct hit amidships on PRINCETON. Damage control efforts were well underway when, approximately 20 minutes after the attack, a much heavier explosion wrecked the hangar and after flight deck. Although hampered by continuing Japanese attacks on the task force and rising seas, PRINCETON's crew continued to work with the escorting destroyers and cruisers to bring the fires under control. At 1523, a massive explosion blew off the carrier's entire stern, which caused heavy damage not only to the stricken carrier, but to the light cruiser BIRMINGHAM (CL-62), which was alongside to help with firefighting. Since the burning carrier was a beacon to lurking Japanese submarines and aircraft, withdrawing US ships sank



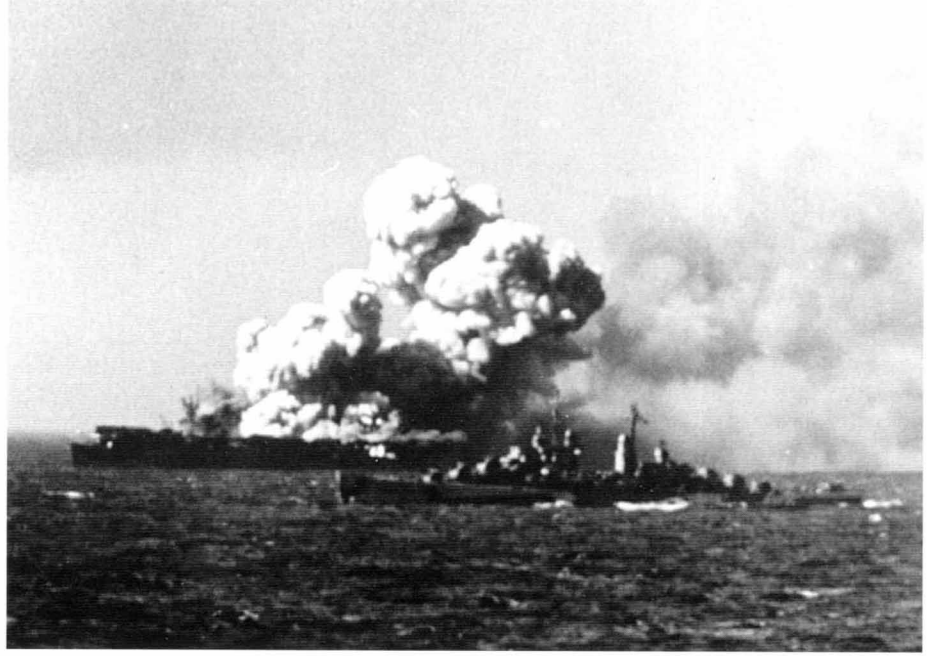
USS PRINCETON (CVL-23) burns approximately 20 minutes after she was attacked east of the Polillo Islands on 24 October 1944. The Polillos are located east of the Philippine island of Luzon. A Japanese Naval Air Force dive-bomber attacked the carrier, dropping one 250 KG (551.1 pound) bomb amidships. (US Navy)

PRINCETON shortly before dark. PRINCETON's crew suffered 114 killed and 190 wounded, and BIRMINGHAM had 241 killed and 412 wounded.

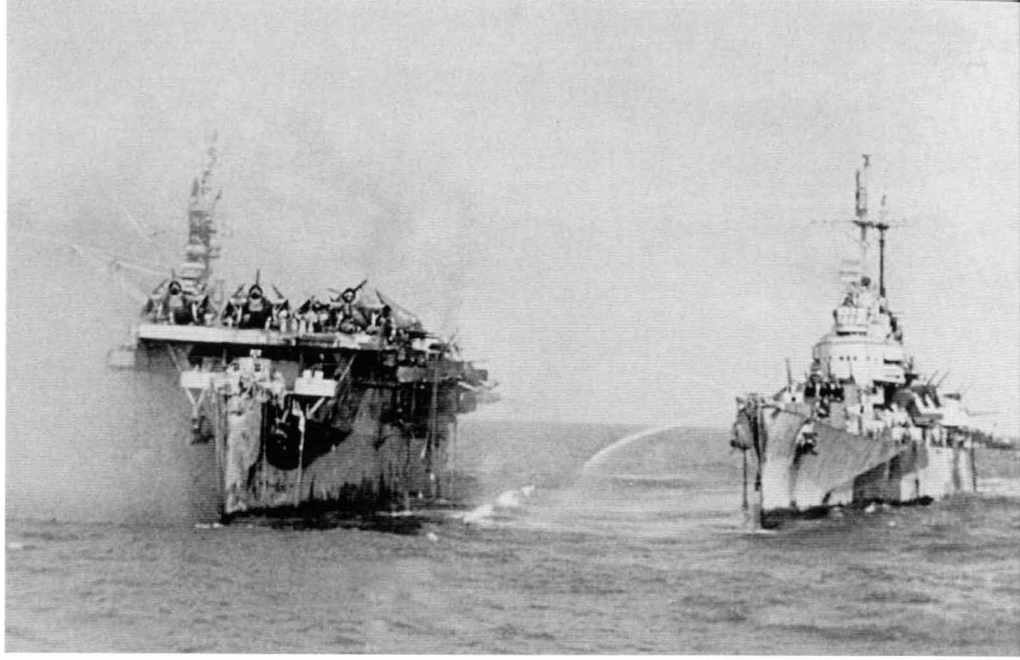
TF 38 struck back at Vice Admiral Takeo Kurita's force in the Battle of the Sibuyan Sea on the afternoon of 24 October 1944. Their aircraft sank the Japanese superbattleship MUSASHI and damaged other ships, which began to withdraw. The Seventh Fleet's old battleships destroyed another group of Japanese surface ships in the Battle of Surigao Strait. Mitscher discounted his pilots' claims as to the damage done and believed Kurita would turn to attack during the night, but Halsey commanded the carriers. When search aircraft sighted Japanese carriers to the north, Halsey charged to the attack and left the vulnerable invasion fleet unguarded. This was despite a report from an INDEPENDENCE Hellcat nightfighter that confirmed Mitscher's fears – Kurita had turned and was headed for the San Bernadino Strait.

On the morning of 25 October, the Japanese plan to lure the carriers away from Leyte and allow its surface ships to destroy the invasion fleet was on the verge of succeeding. The US battleships were off chasing stragglers from the night's gunnery duel, so Kurita's ships arrived off Samar to find only 16 escort carriers and seven destroyers and destroyer escorts defending the invasion fleet. To the north, Halsey launched airstrikes against the decoy carriers in the Battle of Cape Engaño before frantic radio signals from the escort carriers and Nimitz at Pearl Harbor forced him to turn around and head back south. Kurita inexplicably broke off his pursuit of the hopelessly outgunned escort carriers and retreated, which saved the invasion force.

Following the battle, the carriers – short of supplies and with exhausted aircrews – stayed on station supporting the landings. This situation was despite facing the first of the *kamikaze* (suicide aircraft) attacks, since land based air units were unable to operate from the rain soaked fields. Several ships, including BELLEAU WOOD and CABOT, were hit by kamikazes before the end of November. That month, the carriers retired to Ulithi, where they began making changes to deal with this new threat. These changes included replacing some of the carriers' bombers with fighters and changing defensive strategies to provide the task force with greater warnings of enemy attacks. On 10 December, the fleet sortied once again to support landings at Mindoro and Lingayen in the Philippines, but first ran into a typhoon. The storm caused significant damage, including fires on MONTEREY and COWPENS. On Christmas Eve, the battered fleet returned to Ulithi for a week of repairs.



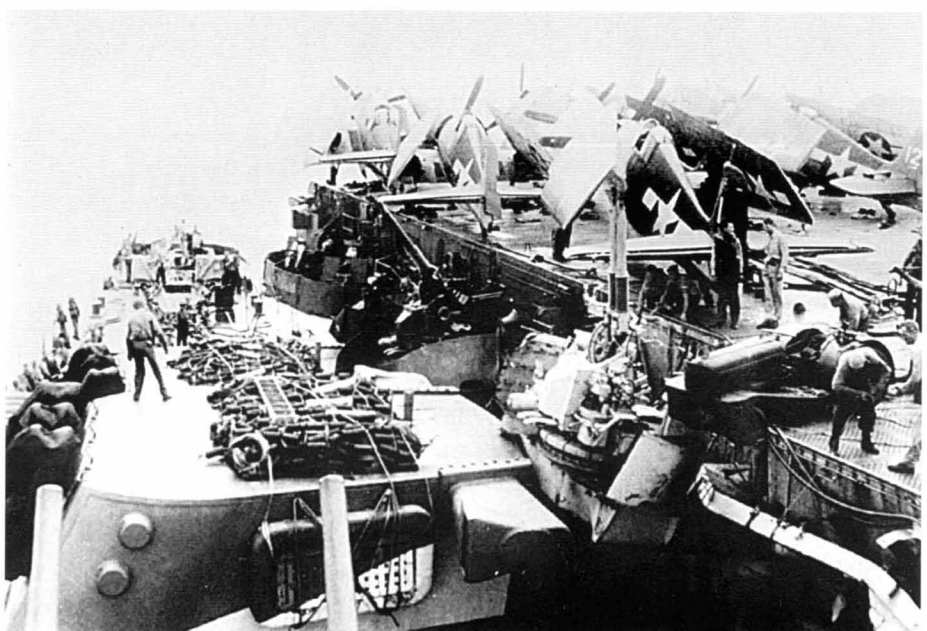
Smoke rises from the first large explosion aboard PRINCETON. A hangar fire from the bomb's detonation reached aircraft parked on the hangar deck, resulting in aircraft fuels and munitions exploding. The ATLANTA class light cruiser USS RENO (CL-96) cruises off PRINCETON's port side. (US Navy)



USS BIRMINGHAM (CL-62) comes alongside the burning PRINCETON to fight fires on 24 October 1944. Both vessels were originally authorized as CLEVELAND class light cruisers, although PRINCETON was one of nine ships converted to light carriers during construction. (US Navy)

BIRMINGHAM pulls alongside PRINCETON during attempts to control the carrier's fires on the afternoon of 24 October 1944. The cruiser's forward 6-inch (15.2 CM) gun turrets caused extensive damage to the carrier's 40MM mounts when the two ships ground together. Several F6F Hellcats were spotted on the forward flight deck when PRINCETON was hit. (US Navy)

RENO pulls close to PRINCETON's port stern to assist in firefighting efforts. Fire hoses were trained from the cruiser's forward deck upon the fires that raged aboard the damaged carrier. RENO scuttled PRINCETON during the US fleet's withdrawal from the Polillos area in the early evening of 24 October. (US Navy)



Crewmen along BIRMINGHAM's starboard side train fire hoses on the burning PRINCETON. The near firefighters were positioned by the two upraised 5-inch (12.7 CM) guns of the right forward turret. These damage control efforts could not prevent a massive explosion in the aft ordnance magazine that afternoon, which blew off the carrier's stern. Debris from that explosion heavily damaged BIRMINGHAM and killed 241 crewmen aboard the cruiser. (US Navy)

Crewmen survey damage to PRINCETON following the first explosion on 24 October. The explosion buckled the forward aircraft elevator and blew out part of the flight deck between the funnels. The hangar deck sliding doors were blown outwards by the blast. PRINCETON sank after being scuttled by RENO at 1700 hours. The carrier had 114 crewmen killed and 190 others wounded by the attack and subsequent explosions. (Floating Drydock)

USS LANGLEY (CVL-27) leads an ESSEX class carrier in a turn to starboard on 12 December 1944. The carriers and other elements of Task Group 38.3 were returning to the advance fleet base at Ulithi Atoll in the Caroline Islands after attacking Japanese positions in the Philippines. LANGLEY's air group of F6F Hellcat fighters and TBF/TBM Avenger torpedo-bombers was spotted on her flight deck. The aircraft were offloaded at Ulithi for major maintenance while the carrier was overhauled at the fleet base. (US Navy)

1945

On 30 December 1944, Task Force (TF) 38 sortied to support the Lingayen landings and strike at airfields on Formosa. Several US ships, including LANGLEY, were hit by Formosa-based *kamikazes* on 21 January 1945. Halsey also sent two task groups charging down the South China Sea in a fruitless search for the Japanese battleships that had escaped at Leyte. The carriers returned to Ulithi once again on 25 January. Two days later, Halsey hauled down his flag, replaced once again by Spruance and Mitscher.

Spruance's Fifth Fleet had three operations slated in 1945: the occupations of Iwo Jima and of Okinawa, and seizing a foothold in mainland China late in the year. The last objective – necessary for a naval and air blockade of Japan – was soon dropped in favor of a direct invasion. More changes were in store for the light carriers. INDEPENDENCE succeeded as a night carrier, but the shortcomings of her small size led to the decision to replace her and BATAAN – then training as a night carrier – with larger carriers. Japan's carriers would not sortie again for battle – they were out of fuel, planes, trained aircrew, and were continually harassed by US submarines – and were confined to port. On 1 March, her last remaining carrier division was officially deactivated. This allowed the Japanese to focus on defending against invasion of their home islands.

On 10 February, TF 58 (with five light carriers) left Ulithi for the Iwo Jima operation. This began with raids on Tokyo on the 16th, Chichi Jima, and Iwo itself to support the landings on the 19th, then Okinawa on the way back to Ulithi. During the ten day respite at Ulithi, COWPENS departed for overhaul, replaced by the refitted BATAAN. On 14 March, Mitscher departed to support the landings at Okinawa, which was the most difficult period of the war for the big carriers. During the 18-19 March raids on Japan, *kamikazes* damaged three of the 15 fast carriers. These attacks continued while the US ground forces' advance on Okinawa slowed against fierce Japanese resistance. With no land based airstrips yet operable, TF 58 provided air cover throughout April and May, although CABOT and LANGLEY were released for overhauls during this period. Halsey and McCain returned on 27 March, but once again Halsey's presence was marked by a typhoon than buckled the flight decks of two fleet carriers. TF 38 continued to support the troops on Okinawa through the worst of the *kamikaze* attacks, finally retiring to the new fleet anchorage at Leyte on 13 June, after approximately 92 days at sea.

The next operation, OLYMPIC, was the invasion of the southern Japanese home island of Kyushu in November of 1945. This was to be followed by CORONET, the invasion of Honshu and occupation of Tokyo itself in March of 1946. TF 38 left Leyte on 1 July to begin pre-invasion strikes. On 30 July, Nimitz ordered Halsey to turn south and give the Japanese islands a wide berth for the next seven days. The reason for this order soon became clear, when B-29s dropped atomic bombs on Hiroshima (6 August) and Nagasaki (9 August). This resulted in Japan beginning surrender negotiations on 10 August. The fast carriers' final strikes were on 13 and 15 August, after which the carrier aircraft flew relief missions to Prisoner of War (POW) camps and provided air cover for occupying forces. The war ended for the light carriers on 2 September with the official surrender ceremony in Tokyo Bay, where the only fleet carrier present – heavy or light – was the veteran COWPENS.

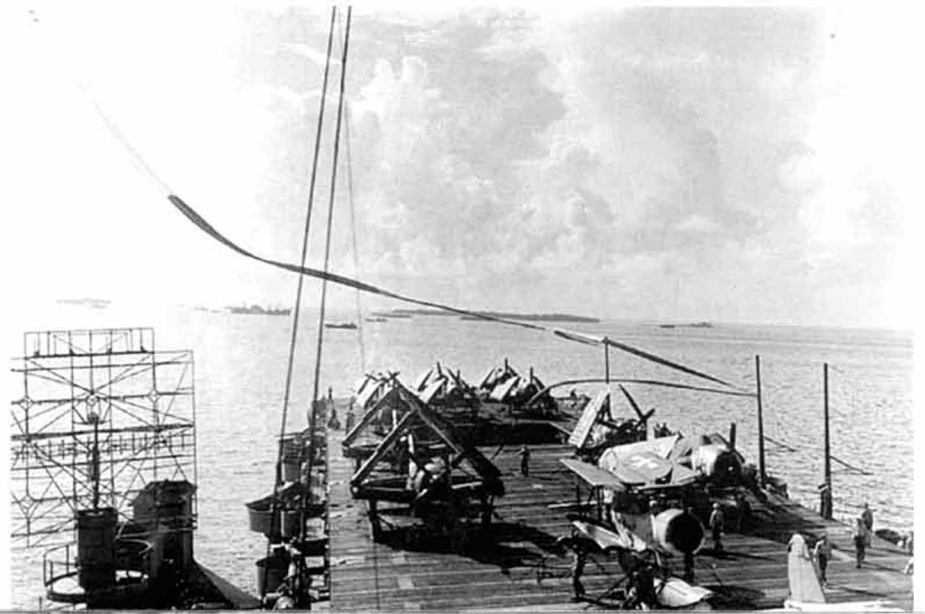
LANGLEY heavily rolls to starboard in a western Pacific storm on 13 January 1945. The INDEPENDENCE class carriers were fitted with hull bulges, which increased its waterline beam by 8 feet 5 inches (2.6 M) over the CLEVELAND class light cruisers. Nevertheless, the light carriers remained vulnerable to typhoons, which damaged the ships and their aircraft. (US Navy)

Crewmen fight fires aboard LANGLEY after she was hit by a kamikaze off Formosa (now Taiwan) on 21 January 1945. The Japanese aircraft hit the forward flight deck and exploded, which caused minor fires. The ESSEX class carrier USS TICONDEROGA (CV-14), also hit by a kamikaze, burns in the background. (US Navy)

LANGLEY flies her 'homeward-bound' pennant from her foremast on 20 May 1945. She departed the Pacific war zone two days earlier for a refit in the United States, which took her out of the remainder of World War Two. The 'homeward-bound' pennant is a greatly lengthened version of the ship's commissioning pennant and was displayed for voyages home from wars. (US Navy)

LANGLEY cruises in the western Pacific on 27 March 1945. The carrier comes out of a sea swell, with a wave crashing over her bow. Most of her aircraft are secured to the flight deck awaiting their next mission. (US Navy)

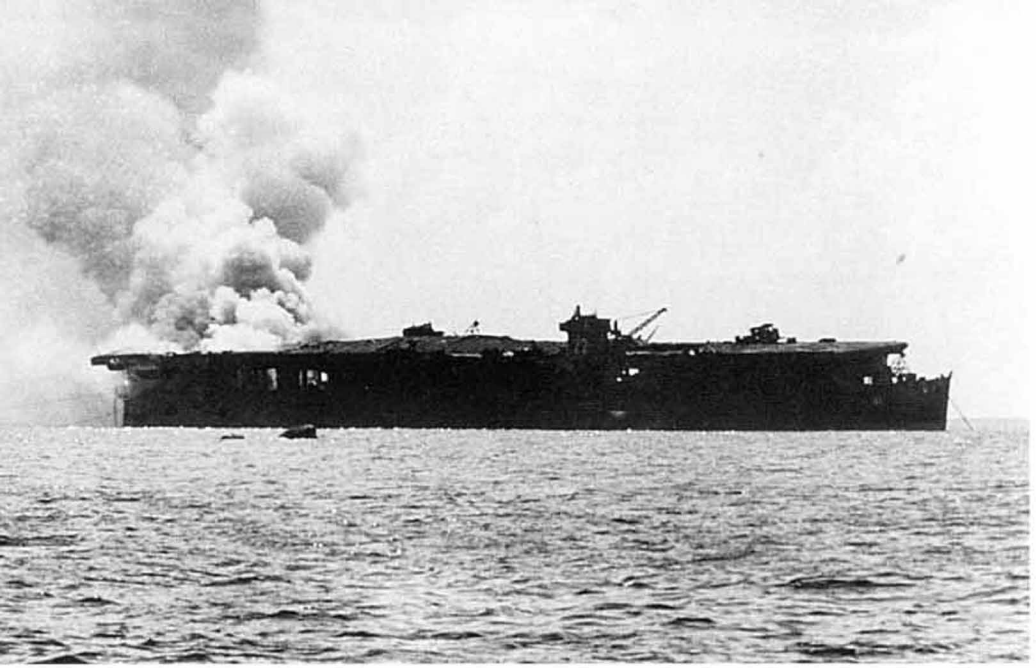
CABOT (CVL-28) flies a long 'homeward-bound' pennant as she departs for San Francisco for overhaul on 13 April 1945, after 15 months in the combat zone. She was equipped with an SK-1 air search radar antenna between the exhaust funnels. Aircraft spotted on the flight deck included OS2U and SOC seaplanes, TBM Avengers, SB2C Helldivers, and F4U Corsair and F6F Hellcat fighters. Radio antennas were raised along the port flight deck side. Other US warships are anchored in the distance. (US Navy)



USS COWPENS (CVL-25) steams slowly off the Mare Island Navy Yard, California on 12 May 1945. The carrier had completed a scheduled overhaul at the yard. She was painted in the Measure 22 camouflage scheme of Navy Blue and Haze Gray during that time. COWPENS was also fitted with updated radar and other electronic equipment while at Mare Island. (US Navy)

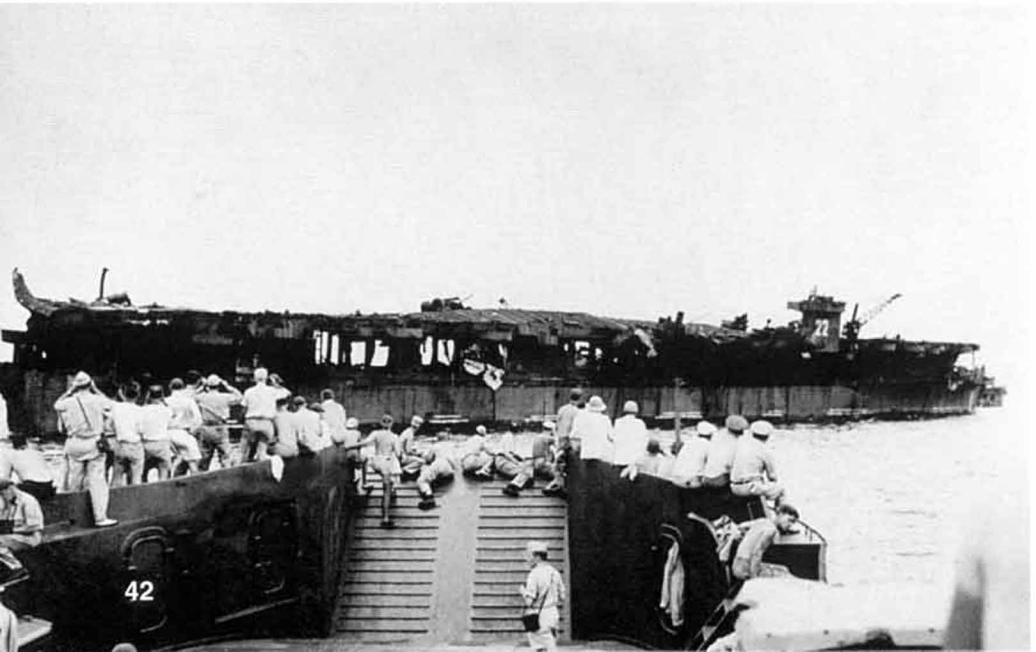
USS MONTEREY (CVL-26) flies an extra-large US ensign on 15 August 1945 – the day news was received of Japan's surrender. She received a new foremast and radar arrangement from her overhaul in early 1945. This included a YE homing beacon antenna atop the mast, an SG surface search radar antenna below and in front of the YE, and a second – higher – yardarm. (US Navy)

Four aircraft carriers – (from front) USS SARATOGA (CV-3), USS ENTERPRISE (CV-6), USS HORNET (CV-12), and USS SAN JACINTO (CVL-30) – are berthed at Naval Air Station (NAS) Alameda, California on 16 November 1945. These vessels represented the four classes of US 'fast carriers' employed against Japan from 1943 until 1945. Alameda – immediately south of Oakland and east of San Francisco – has a deep water jetty beside the airfield for home portage of carriers. Since 1995, HORNET has been preserved as a museum ship at this same pier. (US Navy)



USS INDEPENDENCE (CVL-22) burns after the 'Able' day aerial burst of Operation CROSSROADS on 1 July 1946. A US Army Air Forces B-29 Superfortress dropped an atomic bomb, which exploded above the target ships assembled at Bikini Atoll. White hull numbers were painted on the island and bow sides. (US Navy)

Correspondents aboard a Landing Craft, Utility (LCU) view the badly damaged INDEPENDENCE two days after the 'Able' day aerial burst. Sections of the flight deck buckled under the impact of the atomic explosion. Lingering radioactivity from fallout prevented witnesses from boarding the vessel. (US Navy)

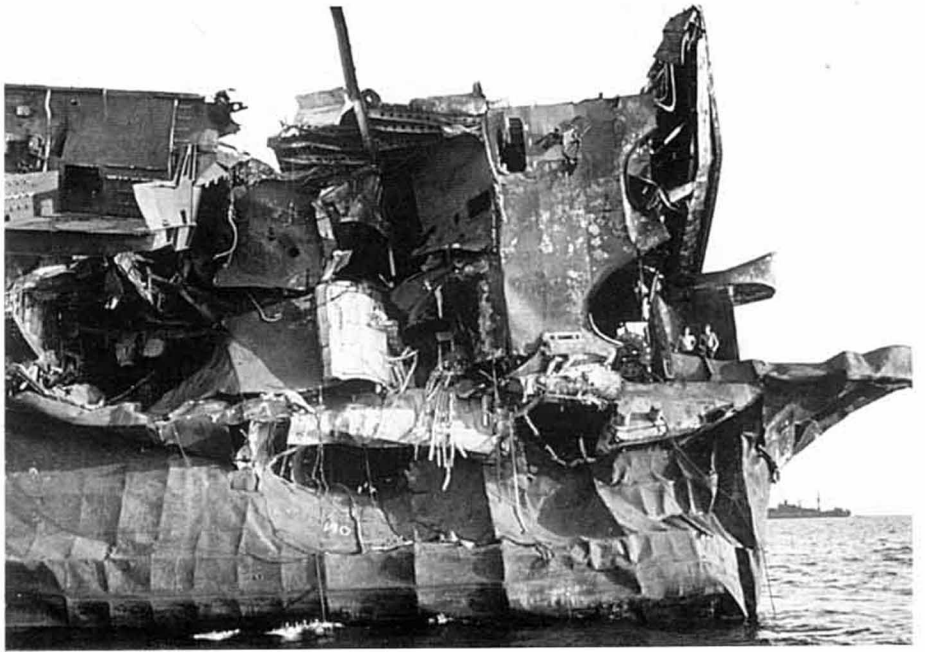


Postwar

After completing service in Operation MAGIC CARPET – returning servicemen to the United States – seven of the eight surviving INDEPENDENCE class ships were put into reserve in early 1947. The remaining unit, INDEPENDENCE, was used in the Operation CROSSROADS atomic bomb tests at Bikini Atoll in the Marshall Islands in July of 1946. These tests were designed to test the effects of nuclear weapons on warships. She suffered heavy damage and after use as a radiation research platform was sunk as a target ship in 1952. Two other ships, COWPENS and SAN JACINTO, were redesignated auxiliary aircraft transports (AVT-1 and AVT-5, respectively) while in reserve in May of 1959, but were never reactivated. COWPENS was stricken later in 1959, and SAN JACINTO in 1970. Both were subsequently scrapped.

Following World War Two, it appeared that the Soviet Union, which had captured the German Navy's late war advances in submarine technology, would field a fleet of advanced submarines. To counter this threat, the postwar Navy designated ten escort carriers (CVEs) and two light carriers (CVLs) for modification to 'hunter-killer' Anti-Submarine Warfare (ASW) carriers. Accordingly, just over a year after being mothballed, the first of the ships returned to service when CABOT was recommissioned as a training and ASW carrier on 27 October 1948. Improvements included new radars and new pole radar masts, a new, higher capacity H4B catapult, sonar, a stronger flight deck and elevator, and the removal of two funnels. BATAAN was recommissioned on 13 May 1950 and similarly modernized as an ASW carrier. She spent her postwar career ferrying aircraft to Korea, and flying strikes in support of ground forces in Korea from late 1950 through early 1953 before being again placed in reserve on 9 April 1954.

Blast effects and fire from the 'Able' shot of Operation CROSSROADS extensively damaged the port quarter of INDEPENDENCE. The carrier's port side faced the aerial explosion. This damage was inspected on 23 July 1946 – two days before the 'Baker' underwater detonation at Bikini. (US Navy)



BATAAN was redesignated an aircraft transport (AVT-4) while in reserve in May of 1959, and was stricken 1 September 1959 and subsequently scrapped. CABOT was again decommissioned 21 January 1955 and was reclassified AVT-3 while in reserve on 15 May 1959.

MONTEREY was recommissioned as a training carrier on 15 September 1950 with half her four boilers remaining mothballed with the two forward funnels capped. This resulted in her speed being reduced from 31.6 knots to 20 knots (37.1 KMH). She was replaced as training carrier by SAIPAN in 1956. MONTEREY was reclassified AVT-2 while still in reserve on 15 May 1959, stricken on 1 June 1970, and later scrapped.

Other navies expressed an interest in the light carriers and both LANGLEY and BELLEAU WOOD were transferred on loan to France under the Mutual Defense Assistance Program in 1951. They were commissioned into French service as LAFAYETTE (R96) and BOIS BELLEAU (R97), respectively. Both participated in operations in Vietnam as the French government attempted to retain control over its former colony, operating F6F Hellcats, SB2C-5 Helldivers, and F4U-7 Corsairs. BOIS BELLEAU returned to the US in 1960 and LAFAYETTE in 1963. Both carriers were stricken and scrapped shortly thereafter.

CABOT was again reactivated and modernized at Philadelphia Navy Yard in 1965-1967 and transferred to Spain, where she was renamed SNS DEDALO (R-01) and commissioned as a helicopter/Harrier carrier in 1967. She was decommissioned from Spanish service on 5 August 1989 and returned to the US, where preservation efforts commenced. CABOT remained on the New Orleans waterfront until 1997, when she was moved to Brownsville, Texas for scrapping. She was briefly moved to nearby Port Isabel, but was later returned to Brownsville where her scrapping began in November of 2000.

A North American SNJ trainer is spotted on the aft flight deck of USS MONTEREY (CVL-26) in the Gulf of Mexico in August of 1951. The light carrier served as a training carrier for student pilots between 1950 and 1956. MONTEREY had two of her four boilers removed in 1950, which reduced her maximum speed from 31.6 knots to 20 knots. (US Navy)

USS CABOT (CVL-28) cruises while serving as a training carrier in 1952. An SNJ trainer is spotted on her flight deck. CABOT was placed in reserve in early 1947 until she was recommissioned as a training and Anti-Submarine Warfare (ASW) carrier on 27 October 1948. (US Navy)

USS BATAAN (CVL-29) arrives at San Diego Bay, California after her second tour off Korea on 26 August 1952. A Douglas R4D transport was spotted behind the aft elevator, with the carrier's F4U Corsairs also parked on the flight deck. BATAAN ferried aircraft to and from Korea on three wartime deployments between late 1950 and early 1953. (US Navy)

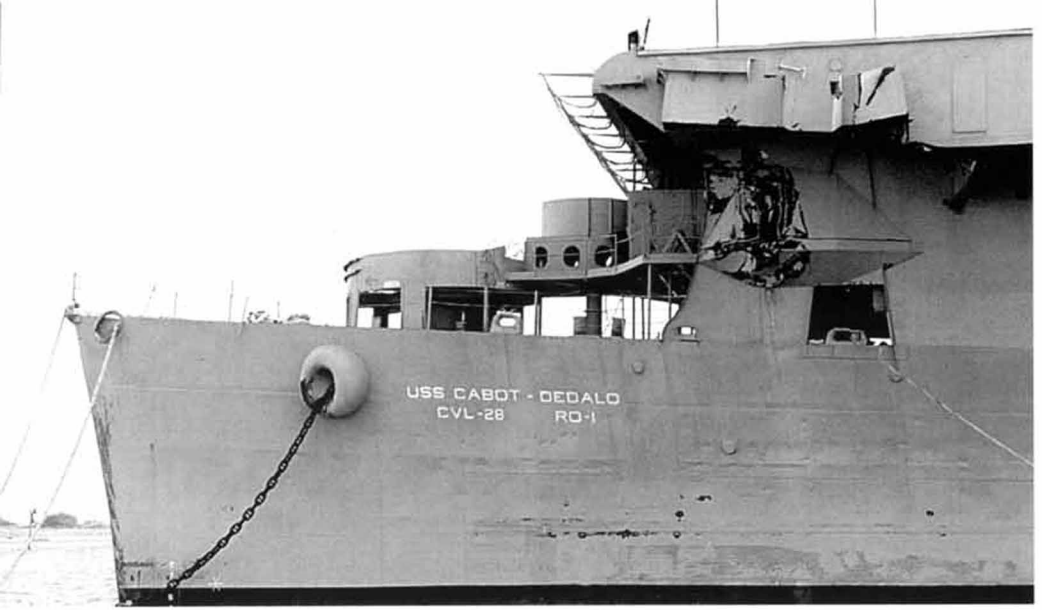
F4Us assigned to Marine Fighter Squadron 312 (VMF-312) are spotted on BATAAN's flight deck in January of 1952. The carrier launched air strikes against Chinese and North Korean forces during her second Korean War deployment from January until August of 1952. Two of her four funnels were removed when she was recommissioned in 1948. (Elsilrac)

MONTEREY steams in the Gulf of Mexico during a training cruise in the early 1950s. A Piaseki HUP Retriever helicopter is spotted on her aft flight deck. MONTEREY was a training carrier for both fixed wing and helicopter pilots assigned to fleet squadrons. Post-World War Two light carriers were painted Haze Gray (5-H, FS35237). (John F. Kirk)

MONTEREY is moored at Pensacola, Florida during the early 1950s. The carrier was based at Pensacola between January of 1951 and June of 1955, while she served as a training carrier. All armament and gun directors were removed when MONTEREY was assigned to the training carrier role. (John F. Kirk)

The carrier LAFAYETTE (R96) – formerly USS LANGLEY (CVL-27) – is moored at a French port during the 1950s. The US loaned LANGLEY and BELLEAU WOOD (CVL-24; renamed BOIS BELLEAU [R97]) to France in 1951. The French replaced the original deck edge radio masts with taller lattice masts. LAFAYETTE was returned to the US in 1963 and later scrapped. (Elsilrac)

A paddlewheel steamboat passes USS CABOT (CVL-28) in New Orleans, Louisiana in March of 1993. CABOT survived in her original straight-deck World War Two configuration for approximately 56 years – more than twice as long as any other US carrier. She served as the Spanish Navy's carrier DEDALO (R-01) between 1967 and 1989. After she was decommissioned by the Spanish, CABOT was berthed in New Orleans between 1989 and 1997. (Michael Smith)



CABOT lies at anchor in Port Isabel, Texas on 30 December 1997. The bow was painted with the ship's names and designations during its service with the US and Spanish Navies. Rust spots on the hull and superstructure attested to years of neglect following her decommissioning in 1989. (Gerard Mittelstaedt)

Several lines moor CABOT to its pier at Port Isabel, Texas on 30 December 1997. A flagpole for flying the ship's ensign while in port was attached to the aft flight deck edge. CABOT's radio and radar antennas remained, although the majority of the equipment was removed from the ship after its 1989 decommissioning. A quad mount 40MM cannon was fitted in the stern sponson. (Gerard Mittelstaedt)

The scrapping of CABOT is well advanced at Brownsville, Texas on 19 March 2001. Approximately half of the hangar deck is exposed, which demonstrated how the hangar deck was built up from the original cruiser main deck. The original main deck followed the line of the hull blister added to the carrier. Flight deck supports are located opposite of the aft exhaust funnel. (ECOSAT)

CABOT's island superstructure, Combat Information Center (CIC), and pilot ready room are reassembled at the Texas Air Museum in Rio Hondo, Texas on 19 January 2002. The upper section of the island – cut into three sections during scrapping – was lowered by crane onto the exhibit area. Artifacts in the foreground included (from left): part of a twin mount 40MM cannon, the ship's nameplate, and flight deck sections. (Texas Air Museum)

SAIPAN Class Light Carriers

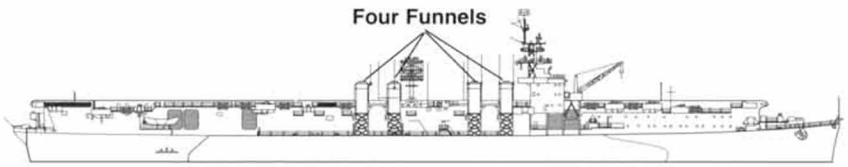
The two **SAIPAN** class light carriers were authorized in 1943 to replace the expected attrition of two INDEPENDENCE class ships during the war. This allowed the carrier fleet, expected to grow to 18 heavy carriers, to continue operating task groups comprised of two heavy carriers and one light carrier. The SAIPANs were not direct cruiser conversions, but were built from the keel up as carriers, albeit on hulls based on the **BALTIMORE** class (CA-68) heavy cruisers then under construction.

The SAIPAN class' overall length was 683 feet 7 inches (208.4 M) long, but it was only 664 feet (202.4 M) long at the waterline. The side bulge increased the beam from the BALTIMORE class cruisers' original beam of 70 feet 10 inches (21.6 M) to 76 feet 9 inches (23.4 M) at the waterline. The overall beam at the flight deck – including sponsons and funnels – was 108 feet (32.9 M). The flight deck was 611 feet (186.2 M) long and 80 feet (24.4 M) wide. The hangar deck was 284 feet long (86.6 M) and 68 feet (20.7 M) wide. The design displacement amounted to 14,500 tons (13,154.4 MT), but grew to 18,750 tons (17,010 MT) at full load. The design draft of 25 feet 10 inches (7.9 M) increased to 27 feet 11 inches (8.5 M) at full load. Their designed endurance was 11,700 nautical miles (21,682.3 KM) at 14 knots (25.9 KMH).

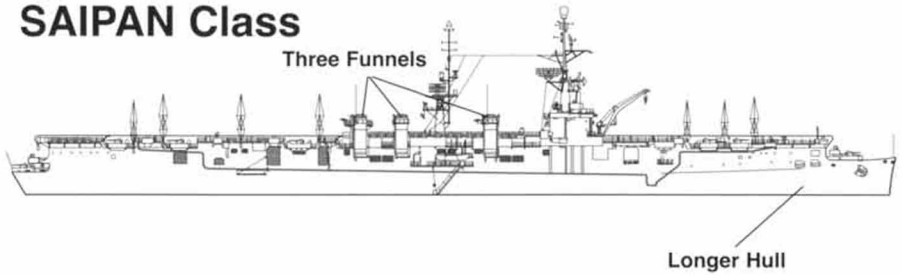
The ability to build from the keel up, as well as wartime experience with the INDEPENDENCE class, allowed the ship's designers to construct a markedly improved light carrier. The separate side bulge was eliminated by fairing it cleanly into the hull, and the bow and stern lines were slightly altered from the cruiser shape to permit the addition of two 40MM quad mounts on the bow and stern – an arrangement identical to the late war ESSEX carriers. The larger hulls permitted a rearrangement of the deck and side armor by extending it further forward, providing better underwater protection. The SAIPAN class light carrier retained the four Babcock & Wilcox boilers and General Electric geared turbines of the BALTIMORE class, which generated 120,000 SHP. The SAIPAN class side armor was changed from protection against 8-inch (20.3 CM) shellfire on the BALTIMORE class cruisers to protection only against 6-inch (15.2 CM) shellfire. This reduced armor resulted in the carrier's best speed increased to 33 knots (61.2 KMH) – one knot faster than the INDEPENDENCE class. The SAIPAN class initially had the same four smokestacks as the INDEPENDENCE class, but one was later removed to reduce topweight. Torpedo stowage was moved from the hangar deck to the second platform level deep within the ship, where better protection was available. The rearrangement of the deck armor also allowed fighter direction, air plot, and the Combat Information Center (CIC) to be placed under the protective deck. The masts were enlarged, providing better radar arrangement. The flight deck was provided with several extensions to assist aircraft handling, along with accommodating two torpedo elevators and a bomb elevator. Neither ship saw service in World War Two.

The ships were temporarily classified as auxiliary aircraft transports (AVT) while in reserve in the 1950s, then were converted to communications/command ships in the 1960s. The ships' configurations following conversion were quite similar – the flight deck was converted to an 'antenna farm' with catapults and arresting wires removed, a helicopter landing area was retained aft, and the hangar was converted to house communications facilities. The ships continued to operate until satellite communications rendered them obsolete.

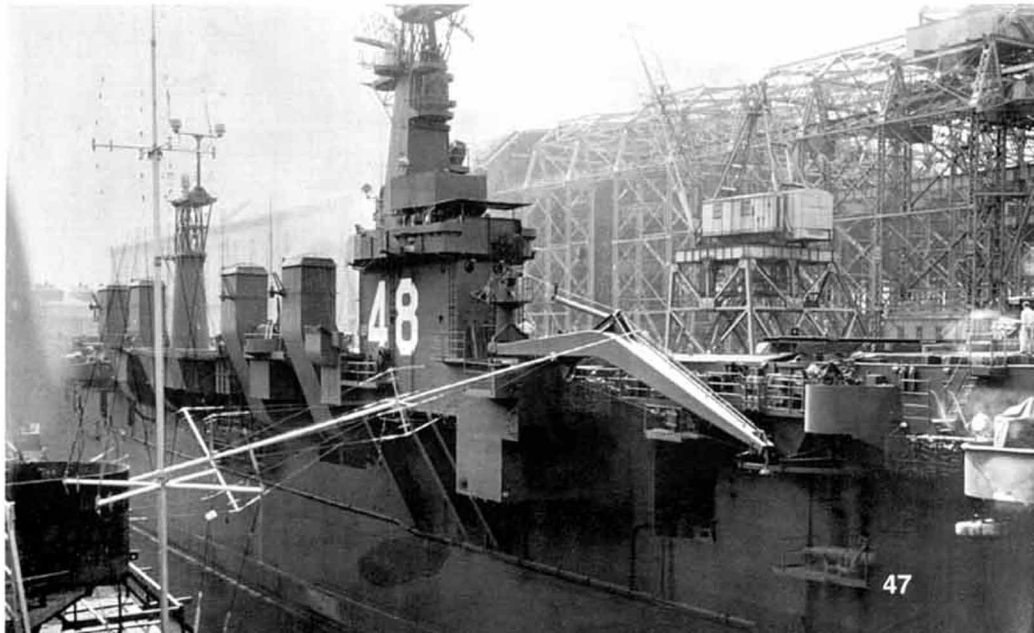
INDEPENDENCE Class

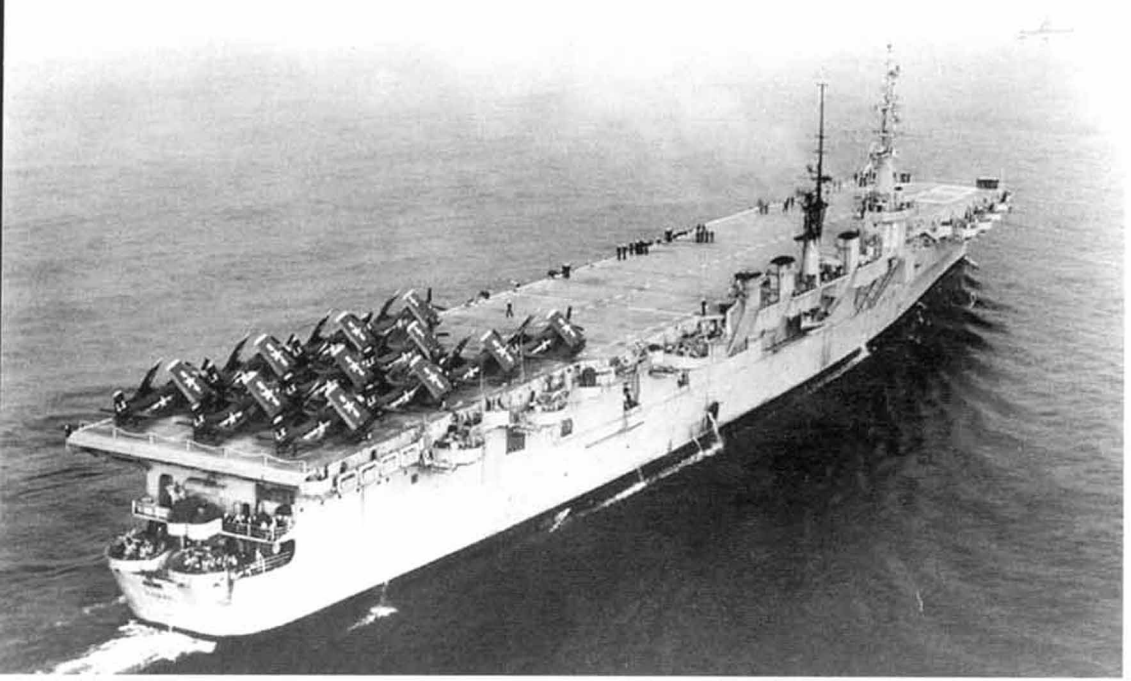


SAIPAN Class



USS SAIPAN (CVL-48) performs her inclining experiment at the New York Shipbuilding Yard in Camden, New Jersey on 22 June 1946. Heavy weights were placed along the sides to test the ship's stability under inclined situations. SAIPAN was finished in the early postwar Measure 21 scheme, which used No 7 Navy Gray (FS36044). This color used the same 5-N designation as wartime Navy Blue. A white hull number was painted on the island. (Floating Drydock)





(Above) SAIPAN is underway with 11 Douglas AD-1 Skyraiders parked on its aft flight deck during the mid-1950s. The SAIPAN class light carriers carried two quad-mounted 40MM cannon on the bow and stern, while the earlier and narrower INDEPENDENCE class ships could only carry one quad 40MM weapon. She was finished in Measure 27, the Haze Gray (5-H, FS35237) scheme. (US Navy)

USS SAIPAN/ARLINGTON (CVL-48)

USS SAIPAN (CVL-48) was laid down on 10 July 1944 and commissioned on 14 July 1946, just under a year after the end of hostilities against Japan. From 1946 to 1953, she performed a variety of roles. These roles included: training student pilots out of Pensacola, Florida; participating in tests of jet operational techniques, carrier tactics, and electronic instrumentation; participation in fleet exercises and reservist training cruises; and, a brief deployment with the Sixth Fleet in the Mediterranean in 1951. In 1953-1954, SAIPAN operated off Korea with Task Force 95 conducting surveillance and reconnaissance missions, ferrying aircraft, and participating in amphibious exercises. She resumed training duties from 1954 until 1957 and was decommissioned and placed in the reserve fleet on 3 October 1957.

SAIPAN was reclassified AVT-6 while in reserve on 15 May 1959, then in 1963-1964 was converted to a Communications Major Relay ship (AGMR-2) and renamed **ARLINGTON** in honor of Arlington County, Virginia, the site of one of the Navy's first radio test stations. She was recommissioned on 27 August 1966 and after exercises deployed to the Western Pacific where she rotated with former escort carrier ANNAPOLIS (AGMR-1) off Vietnam from 1967-1969. These ships provided communications links between Vietnam and Washington. Between tours in Vietnam in 1968-1969, ARLINGTON participated in the recovery of Apollo lunar missions 8, 10,

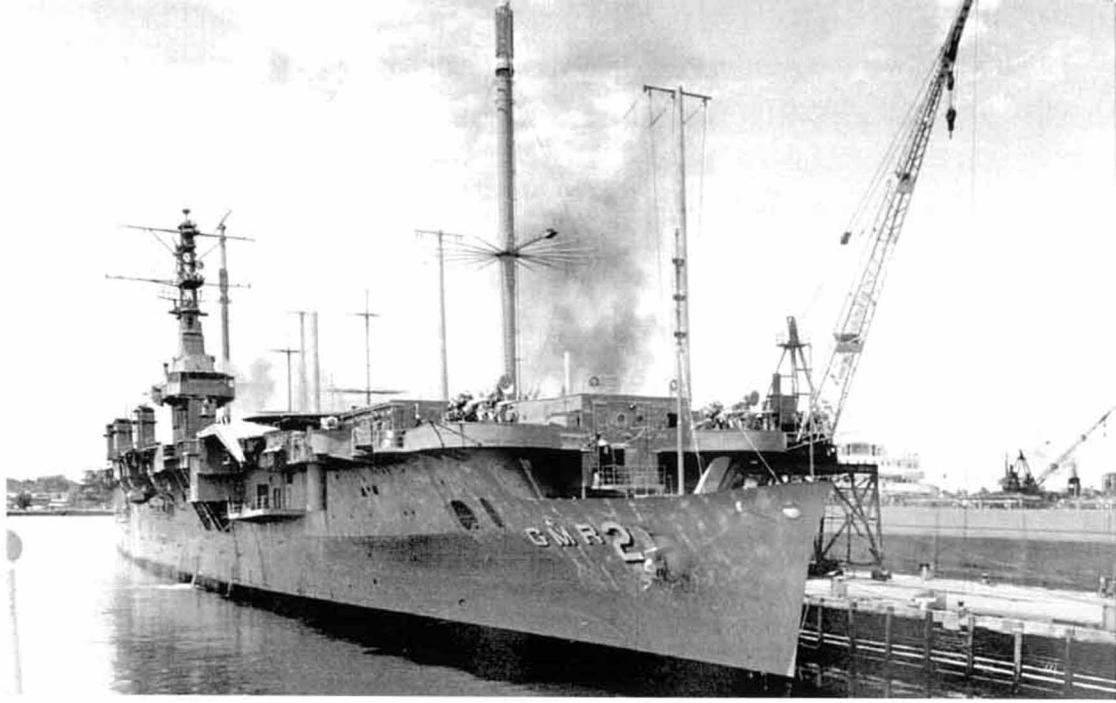
(Below) USS ARLINGTON (AGMR-2) cruises off the Pacific coast during the late 1960s. This ship – formerly USS SAIPAN (CVL-48) – served as a communications relay ship off the Vietnamese coast between 1967 until 1969. Nine masts were mounted on the flight deck for communications equipment. (Elsilrac)

and 11 as part of Task Force 130, the Manned Spacecraft Recovery Force, Pacific. She was decommissioned on 14 January 1970, stricken on 15 August 1975, and later scrapped. ARLINGTON earned seven campaign stars for service off Vietnam.

USS WRIGHT (CVL-49)

The **USS WRIGHT** (CVL-49) was laid down on 21 August 1944 and commissioned at the Philadelphia Naval Shipyard on 9 February 1947. From 1947 to 1951, she served as a training carrier and conducted naval reservist cruises and exercises in Anti-Submarine Warfare (ASW). During 1951 and 1953, she briefly deployed with the Sixth Fleet in the Mediterranean, then returned to the East Coast for ASW patrols and North Atlantic Treaty Organization (NATO) exercises. In 1954, WRIGHT went to the Pacific, where she operated off Korea and Okinawa before returning to the West Coast, where she was decommissioned on 15 March 1956.

While in reserve, WRIGHT was reclassified as an auxiliary aircraft transport (AVT-7) on 15 May 1959. In 1962, she was converted to a command ship with extensive Presidential command facilities and reclassified as CC-2. She was recommissioned on 11 May 1963 and operated on the East Coast in this capacity until 1969. WRIGHT was decommissioned on 27 May 1970, and again placed in reserve. She was stricken from the Navy lists on 1 December 1977 and scrapped in 1980.



(Above) ARLINGTON is docked at a US Pacific Fleet base during the late 1960s. She was armed with twin mount 3-inch (7.6 CM) guns at the bow and stern. The two tallest antenna masts were mounted on the centerline and were used for long-range radio signaling by scattering transmissions off the troposphere – the lowest portion of the Earth's atmosphere. (Elsilrac)

(Below) USS WRIGHT (CC-2) cruises off the US East Coast during the 1960s. She was deployed as a command ship between 1963 and 1969. The aft flight deck of both converted SAIPAN class light carriers could accommodate three helicopters. WRIGHT's Presidential command role was ended in 1969, due to advances in satellite communications. (Elsilrac)

ISBN 0-89747-437-6
90000>
9 780897 474375

(Above) USS PRINCETON (CVL-23) cruises off the Philippine island of Luzon in October of 1944. She was finished in a heavily weathered Measure 33/Design 7A scheme. PRINCETON was hit by a Japanese bomb and sunk on 24 October.

(Below) USS WRIGHT (CC-2) served as a command ship off the US East Coast during the mid to late 1960s. The SAIPAN class light carrier was modified to house an 'antenna farm' on most of its flight deck. The aft flight deck remained available for helicopters.